AMERICAN BEE JOURNAL.

EDITED AND PUBLISHED BY W. F. CLARKE, CHICAGO, ILL.

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Novice.

DEAR BEE JOURNAL:—Do you really think your old correspondent quarrelsome? We certainly had an idea of endeavoring to make people better instead of worse, and supposed when we advised bee-keepers to make a hive that did not cost over $1.00, that we should only incur the displeasure and wrath of those having "rights for sale," and perhaps such is the case. Let us see: Adair "talked severe" to us first, and he advertises rights even yet. Alley came next and positively called names, and on page 234, April number, he seems to have been sorry he "didn't more;" see his article entitled "Something about Hives." Really, Mr. Alley, *our* name ain't "Hives," but we almost wished it was in reading your communication, for we were so tired of hearing so much the one at the head of this article. We did think of mentioning that our friend Shaw has just lost the bees that occupied that unlucky "Bay State," but as it might make more trouble we won't. King has just decided to *give the rights* to all the purchasers of American and International Hives, and if we are right Mr. Alley is going to follow, and Jasper Hazen don't charge but *five dollars* now, (the circular he sent us reads *ten*), and we presume Mr. Burch will, after a while, advertise a hive that gives rights free, and then Gallup too, will send a description to the A. B. J. of his "New Idea" hive. (We'll pay the dollar, Mr. Editor, even if Gallup didn't send us but twenty-five cents for our Magazine, and we advertised his honey in it too *for nothing*, so well that he sold it all in a hurry.)

We wondered why Mr. Moore, page 227, wrote so unkindly, and what possible objection he could have to our circular, until we saw his advertisement, and "rights, $5.00," in *Bee-Keepers' Magazine* for April. Our harmless little circular *will* spoil the sale of rights and we meant it should. We can't think what has given rise to the impression that we advise several hundred or a thousand colonies in one apiary. Mr. Hazen's quotation was only the answer we gave some one who asked what we should do if some bee-keeper located an apiary near our basswood orchard. We certainly shall not get 1,000 colonies in this locality at the present rate for we have lost thirteen out of our seventy-one now, and we fear it will be a long time before we "know all about wintering," to say nothing of knowing all about bee-keeping.

Mr. Hazen forgets that he himself mentions in the *Rural New Yorker* having given colonies young bees to strengthen them, so we need not mention other sources of information.

"The Coming Hive," from "Scientific," page 220, is in the right spirit, and is glorious, and we hope our honest, earnest bee-keepers will help him work out the problem. Those who succeed in out-door wintering, we should advise to adhere to that plan by all means, and the same may be said of hives with double walls. We sincerely hope we have no prejudices that stand in the way of our progress. So far as dysentery is concerned, we believe the evidence now amply sufficient that sugar syrup is a sure preventive, and until some one else shall show *in print* where they advocated its use as better than honey we claim the merit of the discovery, as we gave it on the pages of this AMERICAN BEE JOURNAL.

We have lost thirteen colonies, of which two died from dysentery, caused by natural stores. One of them we much regret as it was the Quinby hive. It contained a large amount of stores gathered in June, and an abundance of bees, but they died off gradually until the middle of March, then they were very weak, but as they had considerable brood, mostly sealed, we decided to make them go through on their natural stores, until the balance died all at once, combs and bees damp and soiled. A part of the remainder we feel sure died because they were fed thin syrup too late in the fall for the bees to seal it up, and the matter was worse because these colonies were weak in numbers. Strong colonies perhaps might be fed safely in October, or even November, but not weak ones we think. The stocks died without any apparent cause so far as we could see, unless it was that they gathered considerable stores from a cider mill near, after they had been fed their rations.

About a dozen colonies were given combs of sealed syrup from our "barrel-feeder," their own combs having been entirely removed; and these are in most excellent condition. Not more than one day occurred in March on which bees could fly freely, or we might perhaps have saved half of the thirteen; besides a small hurricane twisted the vane off our windmill and then blew the rest all to pieces, and we were so afraid that "patent hive men" might rejoice that we could make no more dollar hives, that we neglected everything for a week or more to put it in repair.

"Mr. Novice! do you know you are laying the blame all on some one else when you really neglected the bees? Do you know that it is a positive duty of yours to acknowledge leaving the Quinby hive on its summer stand without so much as removing the boxes?"

But it was so large we couldn't carry it into the bee-house.

"Then you should have removed the boxes and turned the frames, and packed it according to Mr. Q's directions."

So we should have done, but it was almost dark when the balance were housed, and the next day was stormy, and—and—there were no more pleasant days all winter.

"You mean you were careless and negligent, just as those are that you say should never attempt to keep bees. If Adair's conjecture that you neglected the Quinby hive in spring and summer, *was* incorrect, he certainly would have been right had he mentioned Autumn and Winter care."

But would they not have had the dysentery any way? you know they had natural stores. Next winter we will give them sugar syrup too, as you are satisfied *now* it is the best; and for the present we will immediately put one of our finest colonies in the hive and *try* and demonstrate that "we too, can raise box honey."

By the way, Mr. Editor, we are pleased to notice an advertisement of hives in the April number for $1.00 besides our own. We have never seen Mr. Stinebring, and do not know how his hive is made, but he bears a good reputation, and we hope more manufactures of $1.00 hives may follow in his track. We really hope they may not meet with the abuse we have received in breaking the first furrow in this direction. We have plenty of other employment and when some one else will do better work than we have done, for the same pay or less, we will welcome them as benefactors to our bee-keeping friends.

So far as stirring up trouble is concerned, we shall, with your permission, Mr. Editor, overhaul all articles written with motives of profit by patentees of hives, and accept the abuse that follows as a matter of course.

When "rights" are dropped, and patentees turn their attention toward making good hives at a fair price, (and this result seems even now dawning), we shall be ready to drop personalities, having accomplished all that we desired. And the thought of even having contributed a little toward hastening this result, will be ample compensation to

NOVICE.

P. S.—We accept the challenge on page 225, with the most friendly feelings, providing it is undertaken not to see who "licks," but to determine partially which way occupies most time. We believe Mr. Oldt is not a "patent hive man," (those who abuse us are, almost invariably), and so we will accept his simple statement; and we believe the readers of the A. B. J. will, as a general rule prefer *our* simple statement to that of "responsible judges," but we are not over particular. We think the honey should be removed from the hive and prepared all ready for shipping. About five hundred pounds is a comfortable day's work in our opinion for a man, with a woman or girl for an assistant. Katy Grimm did much more than this however, but her days' works we think must have been more than comfortable. If Mr. Oldt can remove the bees without losing or killing any from five hundred pounds in boxes in less than a day, we think he must have some new appliances, or possibly box honey is not as much trouble as we have been led to think; in either case we shall be very glad to hear of improved facilities in handling honey.

[For the American Bee Journal.]

Improved Breeds of Bees.

BY D. L. ADAIR.

In a communication in the April number A. B. J., I attempted to show that we cannot improve our bees by further indiscriminate importations from Italy, and that enough of them had been brought to this country to answer our purposes. I further took the ground that we will have to establish distinct breeds for ourselves, as neither the Italian nor the American bees are uniform in any desirable characteristic.

All living things, animal or vegetable, have a tendency to change their natures. None of our domesticated animals are what they were originally. Our cultivated fruits and vegetables are far removed from their original nature, and are still sporting into new forms, and taking on peculiarities of most remarkable kinds.

Man cannot create or destroy a particle of matter, but he can take advantage of the laws governing matter, and make it subserve his wants. It required no great intelligence in the first tillers of the soil to induce them to select the best of their crops for seed, nor in the first herdsmen to select their best and most easily managed animals to breed from. Jacob seems to have been so well acquainted with this law of variations that he was enabled to change the color of the cattle he had charge of, and spot and stripe them as he pleased.

In a wild state, in their natural *habitat*, these variations are but slight, and soon breed back to the natural type, but when animals or plants are removed and subjected to new conditions, the changes in character are often very sudden and marked. A most notable instance of this is the turkey, which was unknown until the discovery of America. All efforts at domestication here have been failures. It has been frequently semi-domesticated, but even after generations, it has reverted to its wild habits. About 300 years ago it was taken to Europe, where it encountered different conditions of existence—a difference in its food and in climate. The result was, that in adapting itself to the new order of things, its primitive nature was broken up. It varied, and the result was that it was not only thoroughly tamed, but like Jacob's cattle, it changed its color; some became darker, some white, others yellow, while others again became spotted. And the change was so radical that when brought back, it retained its domestic nature, and has not reverted to its wild state.

The potato is a similar instance among vegetables. A little more than a hundred years ago it was taken from Spanish America to Europe. Under new conditions it varied from the insignificant tuber it was,

and by cultivation and selection it has been brought up to its present state. It comes back to America so much of a foreigner that we call it Irish.

The honey bee, we have seen, is in a state of variation, whether we take the Italian or the black bee, but unlike the turkey or the potato, man has had but little to do in shaping the change. Until within a few years, man had very limited means at command to do it. In the first place, bee-keeping was locked up in superstition, and in the next place, the workings of the bees were locked up in logs and boxes. The whole thing was a sealed mystery. The discoveries that culminated in the Dzierzon theory unlocked the one, and the movable comb hive gave us the key to the other difficulty.

Until within the last dozen years, a bee was a bee, and no one thought of one bee being better than or different from another. Just then the Italian bee stepped in, and revealed the fact that the law of variations applied to insects as well as to higher animals, and to vegetables; not only that the Italian bees, as a class, differed from our native bees, but that the Italians differed among themselves, and our common bees were not all alike.

Now this condition of things, instead of being a difficulty, is just what we want in order to get superior varieties, and if taken hold of properly, will result in a very few years in doubling the utility of this already most useful insect.

It is not reasonable to suppose that the bee will prove an exception in nature, and we may therefore conclude that it is subject to the same laws that have enabled man to fashion almost at will the whole list of domesticated animals that serve him.

It is probable that most of the improvements that have been made in our domestic animals have been accidental, and were carried out without pursuing any system, or understanding how it was done, merely by selecting the best to breed from, and thus encouraging desirable deviations. But a proper understanding of all the conditions necessary will help us to more speedy success.

Now, the only use we have for bees is to produce honey, and therefore we should cultivate such instincts as will contribute to that end. What are they?

A small colony of bees cannot gather as much honey as a larger one, therefore fecundity in the queen should be increased, and the swarming instinct suppressed. It is estimated that the ovaries of a queen contain the germs of about 500,000 eggs, and when they are laid she dies. If the laying instinct can be cultivated so that all of these can be deposited in one season, instead of extending the period over three to five years, as is generally the case, it is evident that a great advance will be made. But if the swarming impulse is retained, and the colony is continually being disorganized by swarming, the gain will be of doubtful value. All bee-keepers of experience know that there is a great difference in the productiveness of different queens. In every apiary the owner can point out certain colonies that are continually more populous than others. Such should be selected to breed from, and all unprolific queens should be destroyed, and their places filled with others produced from eggs of the most prolific, although the infertile queen should be Italian, and even imported. The tendency to productivess may be encouraged by the treatment that is given the young queens. Their early habits have much to do with their usefulness. When your young queens begin to lay, keep them at it, and never let them stop a day if you can prevent it. If the natural supply of honey gives out, feed—feed all the time and never let the queen be at a loss for empty cells in which to deposit her eggs.* Throw away your hives of 2,000 cubic inches capacity, and put your bees in hives of double that size; for you cannot put a gallon into a quart measure, and so long as you keep your bees so pent up, the queen will be prevented from developing her full capacity. The Chinese make dwarf trees by planting them in pots, and so confining the roots that they cannot expand, and thus after several generations, produce apple and peach trees, and even the oak, that bear fruit when only a foot high. The greatest injury, no doubt, that the productiveness of bees has sustained, has been occasioned by the Procrustean hive of 2,000 cubic inches. Mr. Gallup, in the A. B. J. for August last, says, "When I read in a small pamphlet of Mr. Adair's that a queen would occupy a hive of 4,000 cubic inches, with brood, * * * I thought Mr. Adair's climate was different from ours, or he was mistaken. Somebody was mistaken, and instead of crying out liar, etc., we went to work to find out where the mistake was; and we soon found that, Gallup was mistaken."

If you want to improve your bees, don't put them into "$1 hives," for that will not pay for material enough to build a hive to accommodate a prolific queen. It is false economy to buy anything that does not suit you, because it is cheap; besides, if you want to control the swarming instinct, your bees will never vary their instinct in that particular, so long as they are in such hives. They have already been too long subjected to the Chinese method of dwarfing.

Another rule should be observed. Raise your queens at that season of the year when your colonies are the most industrious and populous, and from the youngest queens you have, that are prolific, that they may inherit the vigor of youth, and not the exhaustion of old age.

Next to fecundity, perhaps, the most desirable thing is quietness. If the bee could be deprived of the stinging instinct, a new impetus would be immediately given to bee-keeping, for a large majority of persons are deterred from engaging in the business through fear of being stung, while many who have bees fail to give them the proper attention from the same cause. Fortunately we find that this instinct varies in different colonies of bees. The gentleness of the Italian bee was urged as its principal recommendation by the first introducers, and many queens that have been imported produced a gentle progeny, but only under favorable conditions, while others, with equal claims to purity, were vicious and unmanageable. The gentleness of the Italian bee is not docility, it is more of a stubborn cowardice. When disturbed, they immediately retire to the recesses of the hive, and instead of sallying out to drive the intruder off, they stick themselves tenaciously

* On this principle short-horn cattle have been caused to acquire the habit of rapid growth, so that in two years they will attain the weight of four or five years-old steers as formerly raised, and after a few generations the habit became so established that their character in that respect became permanent.

to the sheets of honey and brood, as if determined to defend their stores behind the walls of their castles. The bee-keeper who has used the melipult well knows what an objection this is to the Italians as a class, and he who has attempted to "drum" them out, knows they are too stubborn to drive; while the American bee, in all its varieties, if it fights at all, is willing to come out of its entrenchments, and when subjugated it can be driven about at pleasure. On that account, I would prefer the native bee. Many of them show no more disposition to sting than do the gentlest of the Italians, and if it can be shown that they vary to as great an extent in productiveness, I believe a more desirable breed could be produced from them.

At the last meeting of the North American Bee-keepers' Society, the opinion was expressed that the existence of the bee depended on their stings, and they could not be entirely deprived of the instinct to use them. This assumption can hardly be admitted as true, for all of the indigenous species of bees of America, North and South (that is, the *Meliponas* and *Trigonas*), are stingless, and many races and varieties of them have not even the protection of a hive, gum or hollow tree, to shield them, but hang their combs and stores on the limbs of trees. Still they have continued to exist and prosper. I not only believe that it is possible, but I would have no fears of their becoming extinct, even had they no stings. Physiologists tell us that the horns of cattle, the tusks of elephants, and nearly all the weapons with which animals are armed, are imperfections or deformities. Some breeds of cattle, as the Galloway, are without horns, and others have only the rudiments of them, merely attached to the skin, and not sheathing a bony core. And so easy is it to alter the shape and size of the horn, that in the finer breeds of cattle, breeders can do so to suit their fancy, or can obliterate them enterely.

In one instance, I had a natural swarm of bees to come out, whose queen's wings were clipped. She could not fly, but crawled off in the grass. Some of my children, barefooted, were assisting me in hunting her. A great many of the bees were crawling about in the grass. I asked the children if the bees did not sting their feet. They said they did, but that it did not hurt. In parting the grass, I had a number of them to sting me on the hand, and found that what they said was true. On examination, I found that their stings were very small, and many of them so soft that they would not penetrate the skin. It is very likely that if wide and careful observation was made, this would not be an isolated instance of a tendency to get clear of a useless appendage.

About the same time I had another instance of a similar variation in the bees of a colony, not as to the sting, but at least half of the bees were produced without wings, or with only the smallest rudiments of wings. On looking into the hive, they could be seen running about like monster ants. While young they could build comb and nurse the young as well as if they had wings, but when they became old enough to go out to gather honey, of course they were useless, and as but few could be seen crawling around the outside of the hive, it is to be presumed that they wandered off in the grass and were lost. The mother of them had her wings clipped short, as it was my custom then. Whether the wingless condition of the mother had anything to do with producing the same condition in her offspring, is a question worth considering in this connection, as, if true, it would indicate a means by which the sting might be removed by clipping the sting of the queen.

I have seen it stated, and have been told by persons who said they had tried the experiment, that if the tails of dogs be cut off for several generations, a tailless breed may be established. We know that there are families of dogs that are born without tails. If it is the result of such treatment, why may not the wingless bees have been the result of repeated clippings of the wings of the queens? And if one appendage may be thus destroyed, why not another?

The supposition is not inconsistent with physiological laws, for we have instances in the human family where accidental deformities have been transmitted from parents to children.

Another undesirable instinct is that of swarming. In a state of domestication there is not only no necessity for it, but it is positively injurious. With proper management it can be prevented, and if prevented for a time, longer or shorter, and the necessity for it removed, it would disappear as other wild instincts do, under domestication. Swarming is the result of abnormal conditions, such as I have explained in "Progressive Bee Culture," and in a wild state is forced upon them by necessity, and in pursuance of the law of adaptation, by which instincts are developed or repressed so as to accord with surrounding conditions. The eyes of fishes in caves are never used, because the conditions will not permit, and consequently they dry up, and the skull openings are closed. Instincts are governed by the same laws, and are repressed by non-use.

When this much is accomplished, by way of ameliorating the wild nature of the bee, there would, perhaps, be one more difficulty to surmount, and it is not improbable it would follow the changes already suggested, without other aid. We would then want to remove the antipathy that one queen has to another, so that several could be kept in the same colony. In modifying the temperament of the bees, the queens would no doubt share in their civilization, so that they would live together in amity.

Mr. F. Smith, of the British Museum, inclines to the opinion that a colony of *Trigona* contains several queens at a time, as "the multitudes inhabiting some nests are too great to render it possible that one female could produce them all. Mr. Stretch describes a hive that he saw that measured six feet in length, occupying the interior of a decayed tree, and the multitude of bees he compared to a black cloud. M. Guerin found six females in a nest of *Melipona fulvipes*. (Packard.)

The Melipona and Trigona are indigenous to Mexico and Central and South America. There are many species of them. The colonies of many are very numerous. They are stingless. Some build in the hollows of trees, others in the ground; some suspend their nests from the limbs of trees, and at least one species constructs its own hive of clay, it being of very large size. (Smith.)

If these tropical bees can exist under such circumstances, why could not our *Apis mellifica*? And

when perfectly domesticated and made by cultivation as harmless, is there any reason why several fertile females could not inhabit the same hive?

There is, perhaps, no plant grown that yields honey more abundantly than the red clover, but on account of the long tubular carolla in-which it is secreted, it has been up to this time inaccessible to the honey bee. When the Italians were first introduced, it was stated that their tongues were long enough to reach it. Except in rare instances, the statement has failed to be verified. Occasionally, on the second crop, some flower-heads fail to develop their normal size, and a few bees work on them, but I have yet to hear of their doing so to any great extent. Mr. Dadant, of Illinois, suggests, in the "Annals of Bee Culture," that by proper selection of seed from only such heads as the bees have been seen to visit, and repeated selections from sowings on poor ground, a variety of clover might be produced with flowers so small that the honey would be accessible to the bees. The suggestion is plausible and a good one, but it would be better if we could increase the length of the proboscis of the bees.

I had once a colony of gray bees that worked freely on red clover whenever it was in bloom, and stored great quantities of honey gathered from it, while no other bees resorted to it. I Italianized them, and lost the opportunity of profiting by encouraging so valuable a variation, and at the same time spoiled what I now consider the most valuable stock of bees I ever had.

In adapting the bee to our wants, this desirable deviation is probably not beyond our reach. When bees are seen on the red clover, they should be tracked to the hive, which may be done by sprinkling flour on them, and observing what hive they go to, and propagating queens from such colonies.

Mr. F. Smith, in a paper on the Brazilian Honey Bees, read before the Entomological Society of London, 1863, says, "The honey of the species *Mombuca* is said to be black and sour, the quality being dependent on the species of flowers from which the honey is collected. This great difference in the honey of the various species is apparently confirmatory of the fact that each species confines itself to particular flowers, never visiting any other kind. The different relative length of the tongue in the species is also confirmatory of the same supposition; indeed, the great diversity in this respect observable in these bees, appears to me to be analogous to a similar diversity in the length of the bills of humming birds, which, it is well known, are always adapted for reaching the nectaries of the particular flowers which they usually frequent."

This variation in taste, in the Italian as well as the American bees, has been observed. At the same time, two colonies of bees, side by side, will be gathering quite different honey. When that is the case, it is likely that investigation would show that the diversity is occasioned by a difference in the length of the tongue, and does not result from a preference of the bee for one flower over another.

Many of the suggestions I have made will, no no doubt, be considered absurd and ridiculous by some, but while they may not all be realized, I am satisfied that intelligent and patient effort will be fully rewarded, and that we will be fully compensated for any disappointment by developing even more valuable characteristics. The alchemist, in searching for the philosophers' stone, developed the science of chemistry, of many times more value than the object sought for.

D. L. ADAIR.

Hawesville, Ky.

[For the American Bee Journal.]

Last Word About the Bay State Hive.

One word more as to the Bay State Hive, and I promise to be silent forevermore—on that subject at least.

Novice (in his February bulletin), in reply to my question, "Why don't you try a Bay State Hive?" says, "Because it embodies no essentially different principle from Hazen's or Quinby's, and we are trying one of the latter," etc. Now I cannot speak as to Hazen's hive, but I have one of Quinby's, and I know from an experience of two years that there *is* an "essential" difference between them. One that the quick wit of Novice should have discovered long since, and one that I am sure his candor will promptly allow when it is pointed out. The essential difference is this: In Quinby's hive the frames run from front to rear, and consequently are at right angles to the boxes. To work in the latter, the bees must turn abruptly, as it were, from their line of work, and as I have proved from painful experience, they are very loth to do this. In Alley's hive, on the contrary, the frames run from side to side, and consequently the bees pass readily to the boxes without angle or turn. It is exactly in their line of business you see to fill the boxes in the Alley hive; it is an entirely new concern to fill them in the Quinby hive.

This is no simple theory. For two years past I have had both hives. In 1871 most of the boxes of the Alley hives were filled; in 1872 *all* were filled—but in the Quinby hive I had not a single box filled in 1871, and in 1872 only two boxes were filled. This is the whole truth, and I feel bound to give it without fear, favor or affection.

B. I. B.

Polk County Bee-Keepers' Association.

ESSAY BY MR. GALLUP.

The meeting of the Polk County Bee-Keepers' Association yesterday, was fairly attended. After the transaction of some preliminary business, Mr. E. Gallup, of Mitchell county, read the following essay on

ARTIFICIAL INCREASE.

The subject presented to us for discussion is:—How is it possible to increase our stocks as fast as some speak of doing. Mr. Hosmer's statements have created quite an anxiety on the part of the uninitiated in regard to this matter. We have known one instance of an increase of 125 stocks from one in two seasons. The largest increase from one stock in one season that we ever made was twelve, and all were in good condition; all wintered on their summer stands. We made five from one, after the 20th of July, the first season that we commenced in Iowa, and all wintered

through in good condition. But this is not explaining how it was done. In the first place we must have a good locality and a good season, so that there is a continuous flow of nectar (throughout the entire season) from the honey-producing plants or flowers of the locality, or our bees cannot even build the comb, let alone raising brood and storing honey for wintering purposes. True, we can feed artificially to a certain extent, but food from natural sources is the best. Then we must supply every division of bees, whether a large quantity or small, with a good fertile queen. And again, we must confine our bees to a space in the hive suited to the quantity of bees. If we only have bees enough to occupy two combs, we must not give them four. We will now quote from Mr. Hosmer. He says remove all comb that the bees cannot cover. Make the entrance as small as possible to give the bees room to pass in and out, and keep them as warm as you can. As soon as the bees increase enough to cover more comb, set in one sheet at a time (or an empty frame) and place it in the center between two sheets of brood, &c. (See *Bee-Keepers' Magazine*, Vol. 1, No. 1.) There are many methods of accomplishing this increase. But we shall endeavor to confine ourselves to the general principles that must be kept in view whatever method we pursue in its accomplishment. Now there is another item that must not be lost sight of. In making all our divisions we must secure a proper proportion of the different classes of workers, or we shall make a failure on the first start. Allow me to explain: Working bees at a certain age are capable of performing certain labors in and about the hive, and they are incapable of performing any other labor at that certain age. Now, if we take all nursing bees we have no wax workers; if we take all wax workers we have no nursing bees; and if we take all old bees we have neither nursing bees nor wax workers. The reader will readily see why many novices fail entirely or partially in making artificial swarms. A natural or prime swarm of bees, let it be larger or smaller, is invariably composed of the proper number of each class of bees, or, in other words, it is a perfectly balanced colony. There is the requisite quantity of nurses, wax workers and outside laborers to carry on all the labors of the hive, without one class interfering with the other in the least. We must have young or nursing bees in any colony, in order to meet with success. For it makes no difference how good a queen we have, she cannot produce eggs without food, and in order to produce eggs abundantly, she is fed on concentrated food, prepared in the stomachs of the nursing bees. If the reader has understood me thus far, he or she will readily see that in a good locality and a good season, with the proper understanding of the subject we can increase the stock sufficiently to satisfy the most fastidious. A stock of bees should always be confined to a space in the hive suited to the capacity of the number of bees, and then what comb there is can be occupied with eggs, and it can be kept warm by the bees so as to hatch and develop to a perfect bee. But if we place a small quantity of bees in a large space they can do nothing, and consequently they amount to nothing. To thoroughly test the matter, we have taken a quart of bees, one comb and a good queen, and built them up to just as profitable and strong a stock as we had in our yard. But the novice in the business had better make haste slowly, and especially in poor seasons or poor localities. If I understand this matter rightly, Messrs. Hosmer and Gallup are blessed with extra good localities, and especially is this so in ordinary seasons. With my present knowledge of the business, and such seasons as we had in 1870 and 1871, if I devoted my time to the business, I would not be afraid to warrant from ten to sixteen of an increase from every good stock in my yard. But a large increase and a large yield of surplus honey will not both come in the same season. Recollect that you must keep the animal heat concentrated in a compass small enough to suit the quantity of bees, and you are all right. If you hurry too much you spoil the whole. We will here state that the stock that we made five from one after July 20th, on our first commencing in Iowa, was in an old box hive. In the spring I had an old superannuated queen and less than one quart of bees. It is stated that Mr. Hosmer, in 1872, increased 24 stocks up to 143, and took 2,206 pounds of surplus honey from them. Now, as we understand Mr. Hosmer's locality, he gets his surplus honey from basswood, which blooms in July, and consequently made a part of his increase before and a part of it afterwards. That is after he got his surplus, and his increase was about six to one or five from one, which would not be a large increase for this locality, that is when properly done artificially, supposing the season to continue up to October, as it did in many localities. We have had natural swarms come out as late as the 20th of September, and fill their hives with comb, brood and honey, and winter as well as any stock in the lot, since we located here. Then the reader must understand that Mr. Hosmer with his management, after taking his surplus, had comb and honey ready made to make at least two standard stocks from each one. I got 1,600 pounds of surplus from twenty-four stocks, and said stocks more than doubled their quantity of comb, and gave the 1,600 pounds in just eight days, and my locality did not begin to come up with Mr. Hosmer's the past season. In fact, with me it was the poorest season that I have had in the eight years that I have been located in Iowa.

Following the essay was an extremely interesting discussion of the subject presented, and the Society adjourned till the regular meeting in March.—*Iowa State Register, Feb. 1st, 1873.*

[For the American Bee Journal.]

Postage on Queens.

MR. EDITOR:—The legal rate of postage on queen bees, when sent by mail is a matter of some importance to all apiarians, and of especial interest to queen venders. We have laws by which seeds, bulbs, plants, and other articles of like character, may be sent by mail at almost nominal rates, and this is right. But may we send and receive our queens at similar rates?

During the last two seasons I have sent out by mail a good many queens, but have been required by our Post Master to pay on them full letter postage rates.

He claims that there is no law, or rule of the Post Office Department, that authorizes them to be sent at less rates. Our Post Master is an intelligent gentleman, has held the office for many years, and should understand his business. Is he right? This is the question I am now propounding.

While I have had to pay full letter postage rates, usually about six cents on packages containing single queens, I have received queens from other parties, in packages much heavier than mine, with only two cent stamps on them. This difference will amount to several dollars in the course of our season, to parties sending out many queens. It is a matter worth looking into. If we have laws, allowing them to be sent at less rates, we should have the benefit of them. If there are no such laws, we ought to have them, and that speedily. The attention of national legislators should be called to this matter.

M. C. HESTER, Charlestown, Ind.

[Translated from the Bienenzeitung.]

The Italian Bee.

In unpropitious years one learns the worth and superiority of many of the productions of nature, which in good years are not so apparent, owing to the abundance of the yield. It is thus with the Italian bee. I admit that I did oppose the introduction of that bee. Yet the past year the worst we have had in thirty years, has altered my opinion. Now, from the fullest examination, I believe the Italian to be the race most suitable to Germany. Whether those Italians reared artificially by Herr Vogel, are equal to the native Italian, is yet in my mind, a matter of doubt. The appearance is there, but that does not make the Italian bee. In the spring of this year, I had sixteen stands alike as to numbers and quantity of food. Four of these were Italians, and the remaining twelve German bees. During the fine days of March, they all flew alike, and my hope was consequently much raised to obtain this year a large yield. Then came the bad days of April. Were there some few good hours during the day, they were invariably followed by cold winds or wet weather. With the opening of April, my sixteen stocks, during propituous moments flew strong.

But what did I live to see? All the paths of the garden, and the ground around the hive, were covered with German bees, yet no Italians were to be found among them. I then watched the fly-holes. Out of all the hives, many bees flew, the Italians however alone returning. It was a rarity, did the German bees return to the hive. The natural result was, that the German stocks were becoming weaker and weaker, while with the Italians, there was no diminution apparent. Further, by the end of April, the German bees had no brood, while the Italians were rich in brood. May was like April. My German stocks had become so weak, that except in the warm hours of the day, not a bee was to be seen. The Italians on the contrary increased in strength from day to day, and by the end of May began building comb. Long before this I began to feed the German bees, so as to keep them alive. On the tenth of June, the raspberrys began to bloom. The weather became warmer. The Italians began with their whole strength to gather from the raspberrys. The weak German stocks were able to gather little. On the twentieth of June the Acacia began to bloom, but its blossoms were not as rich this year in honey, as they had been in former years, the frost having destroyed fully one half of the blossoms. The Italians now developed daily a stronger flight, as the young bees made their appearance. After eight days, they ascended to the surplus honey rooms and built them half full of comb. The German bees now only began to have large supplies of brood. When on the eighth of July, the Linden began to blossom, and the Italians were so strong, that I began to expect them to swarm. The German bees had also, become stronger, and were laboring rather industriously on the Linden, yet the most of the honey brought into the hive was used for feeding the young brood; there was none stored of any account. With the end of the Linden blossoms the harvest was practically over; still the German stocks continued to increase in numbers so that by the end of August, they were over populous.

The Italians had at that time filled all the honey room with honey, about thirty pounds, and in the brood chambers there was a superabundance for winter use. When at the end of August I inspected also the German stands I was astonished. All the stocks were in arrears, so that in order to winter them I had to feed them strongly.

Had I only Italians, the year 1871 would have been for me a good ordinary one, as four stocks of this species would have given me a yield of one hundred and twelve pounds of honey.

Henceforth I will more and more Italianize my apiary, and request all opponents of the Italian bee, to test my experience in their own apiaries; as I was also an opponent myself, but have been perfectly cured.

Klein—Glienicke near Potsam. VIEBEG.
Nov. 18, 1871.

[For the American Bee Journal.]

All Old Bees.

MR. EDITOR:—It appears that this memorable bee disease question is not solved yet, and probably never will be. I have given a description of how my bees fared through the winter of 71–72, and now for this winter. To-day, March twenty-fifth, they are without exception splendid, fourteen in number. Mind you one feels no ordinary joy and gladness after such a visitation as the winter before this, when it resounded from every part of the land with an echo ' my bees are dead." I hope sincerly that the readers of the highly prized AMERICAN BEE JOURNAL, may be blessed with the general surprise of finding their pets all right with abundance of young bees and brood, as is my case at present. Even the "all old bees" theory must surrender as being the cause of the fatal dysentery of a year ago, for which there is not one particle of foundation. My experience proves it. August seventeenth, I removed a stock of bees to a new stand, supplied the bees on the old stand with full compliment of comb with sealed honey etc., their queen I put in a cage for near four weeks, so not a bee was raised, and there were no other bees but what found their way back to their old stand. I liberated the queen and found after that no brood was started and no bees raised. On the eight of November, I removed them to the cellar, of course they were not powerfully strong, but as

for numbers or quantity of bees I had no aprehension of failure. On the seventh of March, with the thermometer 50° they enjoyed a good hum, and on examination I found brood on three cards 6x8 inches square, the bees quite evidently considerably stronger than when put in winter quarters, and no more dead bees than in any of the others, four or five of which had not as much brood as these.

They had the least dead bees, and the most brood under way I ever had the good fortune to witness in four years, after five months confinement. The greatest drawback the winter before, as I believe now was the want of bee-bread of which they have abundance now, kept the bees from breeding early. In fact I never found bees the middle of March without bread except last year, which accounts for bees having died in the month of May, when apparently all right before that. Consequently I had great trouble to save mine, not an old bee I had left by the fifteenth of May. My Italian showed this, having a queen introduced in October previous.

C. WURSTER.

[For the American Bee Journal.]

Cheap Hives, or Simplicity Simplified.

MR. EDITOR.—You can buy a steam engine for a dollar, or else newspaper advertisements are unreliable. You can buy a printing press for a dollar, or else the advertiser is a deceiver. Now why don't you invest two dollars, get both, and do your own printing? You could make it very profitable to do so, and could afford to reduce the price of the JOURNAL to about seventy-five cents a year. I am not joking, for I see those articles advertised at those prices. There used to be a man in your city who sold microscopes at twenty-five cents each, and paid the freight on them. You can now buy a sewing machine for five dollars, that will sew any kind of seams, hem, fell, tuck, gather, work button holes, and do anything else that a one hundred dollar machine will do, on any kind of material, from mosquito bar to leather, shingles or tin; without cogs, bands or any little wheels to get out of order, and any child, three years old, can run it. That is what the advertisements say.

Now, after you supply yourself with all these conveniences, I would suggest that you go into another little speculation, for you have been, no doubt, keeping your bees in very expensive hives.

You have been using hives, that the frames alone, cost you nearly as much as a steam engine, and have gone to as much expense in painting one of them as would buy a microscope, You have also been so extravagant as to invest another microscope in a quilt honey *board*. You have done another foolish thing or two, for you spent 10 cents for a door strip for your bees to walk up on, 40 cents for tin corners to your frames, 10 cents for metal rabbets to hang the frames on, and even wasted some nails and spent as much as 35 cents in work in putting all together. When you sum all these up, you will find that you have invested a printing press, in addition to the steam engine and the microscopes. You have also been using a two story hive, when it only takes one to make a hive, and have been paying for "the lumber cut ready to nail," 90 cents for each story. In all you have spent on a single hive almost enough to pay for one of those unequalled sewing machines, and if you would buy the sewing machines "in large quantities," like some bee keepers buy their lumber, you could no doubt get two sewing machines for what you have been paying for a single hive.

Now would it not be better for you to buy the "*Simplicity Hive*" advertised in your JOURNAL? It just costs the same amount of money that one of those first class steam engines or printing presses costs, and is equally "simple" in construction. It is like the $5.00 sewing machine. It has no cogs, bands, or little wheels to be getting out of order. It has no frames to be getting twisted around *catterawampus*, and bothering a fellow, so that he will have to go to the expese of getting metal corners to stay them. It has no bottom board to harbor moth worms. It has no honey boards, quilts, pillow cases, nor door steps to it. Why, sir, it is the perfection of "simplicity." It is splendidly "simple." Besides all that, it is not gaumed over with your nasty paint. It is the clean, virgin wood, and the great beauty of it is, that a very small child or two can manage it as easily as they can that sewing machine. Yours in

SIM PLICITY.

P. S. I forgot to say, that you can save $10.00 on each hive by not putting any bees in it, and that will buy four steam engines and six printing presses, or if you have two wives will buy each one a sewing machine. SIM P.

Nota Bena. You need not be bothered with this terrible bee disease, for if you don't put bees in the hive, they won't die with it.

S. PLICITY.

P. S. N. B. If you don't think this too much like an advertisement for the "$1.00 store," I would like for you to publish it, for the benefit of your "simple" subscribers. S. P.

Addenda. I have some notion to go into the manufacture of the "Simplicity" Bee Hive on a large scale. With a four hundred dollar wind-mill, elevated on a tower 55½ feet high, I think that I can get power enough to make bee hives for the whole world. In order to bring them within the reach of all, I propose simplifying the "simplicity" hive by leaving off the sides and top, and selling them at a nickel a piece, or in large lots, at a dollar per hundred, and I will recommend in the next number of my paper, "*The Cleanings* out of Bee Culture," that the sawdust pile be dispensed with, as there is danger of fire, or if it is used, I will advise the purchase of a fire extinguisher, to be on hand in case of conflagrations, and as a good thing to settle bees.

SIMEON PLICITY.

The Old Bee Theory.

In a late number of the JOURNAL, J. W. Hosmer says, he thinks the great loss of bees during the winter of 1872, was caused by too many old, and a want of young bees. I have to say, that I do not believe it. If so, why did stocks which worked all through September and half of October, and carried on breeding until the middle of November, and went into winter quarters, strong in numbers, and these nearly all young bees, nearly all die; while two

miles distant, where they ceased work the middle of July and breeding much earlier than in the other case, yet these all came out in good order, and have done the same thing in the same territory in both cases again this winter? I answer as follows: Those that worked late gathered honey dew, and much of it was unsealed when cold weather came on. In the other case they had none of it.

But to make a little stronger case against the old bee theory, I will give one or two experiments in the matter. In September, 1872, I removed the queen from a stock of black bees for the purpose of giving them an Italian, but they let her starve in the cage through negligence on my part, and then reared one to suit themselves, but she was worthless and lost. After the brood had all hatched, I took the bees all out of the hive and put them in an empty cover, and moved it about one rod, leaving it three days, the bees being queenless. All that knew where to go went back to the old hive. I then gave them a queen, but it was so late that they reared no brood that fall. The younger bees not knowing where else to go, remained in the empty cover and received a queen. I then put them in a hive containing six frames, with enough honey to winter them. I now had two stocks, one composed of old bees having their own honey, the other of young bees with honey from other bees. The old ones wintered finely, without any signs of dysentery. The young ones died with dysentery long before spring. The same winter I put a nucleus hive into the cellar and fed them with sugar syrup for about six weeks, and they were as small and lively as when put in, and raised a lot of young bees, but becoming tired of feeding them every day, I went to a hive and cut out a piece of sealed honey large enough to fill one of the frames in the nucleus hive and gave them. In less than a week they began to look bad and in a few days were dead with a malignant form of dysentery, and the swarm from which I cut the honey followed suit in a few days. The winter just past has been the worst I ever knew for bees. They gathered honey-dew again, and bred late, even after cold weather set in. The stuff (for I cannot call it honey) was unsealed much of it, and soon became thin and watery, and wherever the bees had access to beech timber they are, in many apiaries, all dead. In others, one in ten alive. Two miles north or six east, I never saw bees in finer condition, although they did not work as late, in some places doing nothing after July 10th, and have been exposed to the same kind of weather with no protection, but they lacked one essential element of dysentery, viz: honey dew.

Hosmer says that some one's bees were saved because they were carried out of the cellar, and allowed to fly out, and commenced breeding. Well, I have lost ninety stocks, and they nearly all died with lots of young bees hatched and more hatching all the time. Some of them had four frames filled with brood in all stages, and thousands hatched, yet they died sooner than others which were not breeding any, and I think no worse thing can happen to a colony of bees than to have great numbers of young hatched in January, unless they get out and fly before they are very old. At least such stocks are the first to die with me. I have had dozens of them this winter that were healthy until they began breeding, when they died off so rapidly that the brood would be left without bees to cover it. There has been several days during the past winter that were just warm enough to let the old bees fly, but the young ones wont come out unless it is very fine, and I think that a flight which does not include the young of a hive, does but little good so far as preventing dysentery is concerned. If any one thinks otherwise, of course that is all right, but if they will notice a young bee when it first comes out in summer, at about eight or ten days old, according to the weather, they may generally see a bee as much distended as it should be by a six weeks confinement of an older bee in the winter season. If to this you add poor honey, and keep that bee confined two months or more, how can it live? I have wished many times to see honey dew in the fall, when my bees were doing nothing, but now have to say that I have seen the elephant, for two seasons, and hope to never see it again while I am in the bee business.

Having lost 190 out of 200 stocks in the past two winters, I consider this paying rather dearly for the sight. I think this letter is about long enough, but I have been wanting to let friend Hosmer know that all did not agree with him on the old age theory. I suppose that Hosmer will have something ready to upset my assertion that young bees are more liable to die than old ones, if they cannot fly out, but I have wintered colonies from November to April, without a queen, and then given them a queen, and had them fill all the boxes and swarm almost as early as any of those that nursed their queens through themselves.

E. M. Johnson.

Mentor, Lake Co., O., March 12, 1373.

[For the American Bee Journal.]

Non-Swarmers.

Mr. Editor;—I have known people to give as high as sixty dollars for a bee palace claimed to be a non-swarmer, and to assign as a reason for it, that they only wanted to keep just enough bees to get honey for their own use, and as the Langstroth and all other patterns would swarm, they could get no good out of them. I have also known such palaces to stand empty for years, the bees not being able to winter in them. I have known but one that would not swarm that did the owner any good. It was merely a common box hive, set in a little dark room, four by eight, five feet high, double walled. The bees in this died this winter, for the first time in sixteen years.

The New Idea hive, by Adair and Gallup, I believe, will practically prove a non-swarmer. I have made a few, and will try them the coming season. I think that where the extractor is used, and swarms are not desired, and where comb honey is wanted for family use. these hives will prove the best I know of. But where surplus honey in caps is wanted, I think the Langstroth the best. I send you Adair's description of the New Idea, for the benefit of those who wish to try it the coming season. How to manage it, they can see described by

Gallup, in the March number of the JOURNAL, page 215. R. M. ARGO.

Lowell, Garrard Co., Ky.

NEW IDEA HIVE, WITH FRAMES.

Bottom-Board.—This is best made of narrow flooring boards, tongued and grooved, but may be made of a single width of inch plank, four feet four inches long, sixteen inches wide, nailed on to two or three sills, fourteen inches long, one and a half by three inches. A strip, one by three inches, four feet long, is boxed on the ends of the sills, under the edge of bottom-boards, and edge of bottom-board nailed to them to prevent sagging. Chamfer or slope off front end of bottom-board, two and a half inches back, for alighting board, and cut entrance holes in bottom board, if preferred, instead of in the case.

Case.—A box with only sides and ends, without top or bottom, four feet long inside, and width of bottom-board outside. Set on bottom board. A portico may be added by extending the sides half their width, sloping off and covering. Make it deep enough for the frames you decide on. Glass in the ends, covered by shutters, is a great convenience.

Frames.—I have experimented with many sizes, and I would, under no circumstances, make them deeper than ten inches, inside, nor wider than thirteen. If deeper, add two inches to the width for each additional inch in depth. If less, in same proportion. See "*Progressive Bee-Culture*," page 9, "MORE-ROOM," and what follows, for reason.

Honey-boards.—Have four honey-boards, each to cover one foot of top. The object in dividing the honey-board is that they are more easily worked, and you can open a part of the hive without disturbing the balance. You can open the rear end without stopping work in the front, and you can drive all the bees away from the uncovered part, so that there is no danger of crushing any in putting on.

Roof.—The easiest way is to make a frame of inch plank, two inches wide, for side pieces; the end pieces arched up two or three inches. Cover with plastering lath, touching each other, over which, after wetting, stretch common roofing paper, and nail close with saddler's tacks, six or eight ounces. After the paper dries, give two good coats of white lead paint, and it will out last wood, as it neither shrinks, swells, cracks nor warps. I have paper roofs, now four years old, that are as perfect as when made. The best paper is made by C. J. Fay, Camden, N. J., but a cheaper article can be had of A. V. Dupont, Louisville. Common flour-sack paper, if doubled, with a coat of white lead between, and well painted, makes a good roof, and can be put on with paste.

Most of my hives have shingle roofs, with comb in middle and eaves on sides, nailed on light frames.

The best and most convenient roofs I have, have the eaves at the ends, and are in two parts, hinged in the middle, at the comb, so that one half can be turned up on the other. A little cap covers the joint. To carry out the New Idea perfectly, it is important to have the entrance holes in the end, and only at one end. See *Progressive Bee-Culture*, page 19. D. L. ADAIR.

[For the American Bee Journal.]

Our Question Department.

MR. EDITOR:—I was just going to ask why some of our knowing ones did not answer the questions in the February number. I wrote the heading, then turned to the March number to be sure that there were no answers, and beheld the editorial "Too Kind," but am not sure the "tornado of communications" will cover *that* ground.

Answer No. 1. Bees usually commence breeding rapidly in February, and not unfrequently winter out with comparatively no dead bees left in the cellar or room.

No. 2. No; but the thickest honey will settle in proportion to its thickness, and not color or flavor.

No. 3. Yes, when there is no honey to gather.

No. 4. Yes, when queenless, or when the apiarian lacks the ability or time to equalize them. All are not skilled like Hosmer.

No. 5. Yes, those functions appear to be nearly, if not entirely, under their control.

No. 6. What would have become of us if we had never been created?

No. 7. Take one or two cards from each colony, substituting empty comb, more or less, according to your ability.

No. 8. There are various causes which cannot be explained in this article, but a good card of brood will prevent it.

No. 9. To put in genuine honeycomb, stick to the flat surface of the top bar with wax and resin.

No. 10. Still an open question.

No. 11. Let him who knows tell us.

No. 12. None except uniformity. Italian queens may be bred from "grades," which our experts will pronounce extra, until they see their stock; hence the novice has no more security against imposition than farmers have in purchasing young fruit trees from nurserymen or dealers, unless queen-breeders are more scrupulous, which is a question to be considered.

O. O. WAIT.

West Georgia, Vt.

[For the American Bee Journal.]

Wintering Bees.

MR. EDITOR:—I have kept bees many years, for the purpose, mainly, of studying their habits. I have found it a delightful recreation, with few disappointments; but this last winter is an exception. I have lost a few stocks, and after a close examination of the hives, my experience may be of service to others. My hives were all of the Langstroth pattern, with regular combs well filled, that is, sufficiently supplied with honey, and the queens not over two years old. We have had an intensely cold winter, from November to March, with perhaps four or five days at intervals when the bees could fly. The hives were in the open air, and tilted at an angle of 30 degrees, (about), so that the moisture might run out and the debris roll to the front so as to be easily removed. Upon opening the hives in which the bees died, I found plenty of honey along the upper portion of the frames, and also winter passages, but the bees had evidently

not been able on account of the continued cold, to remove from one cell to the other, and so perished. I never lost bees in this way before, neither do I ever recollect such a winter; but it certainly is a discouraging feature in forming large apiaries, if one severe winter is likely to entail such a heavy loss. I have come to the conclusion that in Northern latitudes we must adopt the tall hives, in contradiction to those which are broad and flat.

Another fact was noticeable—the absence of bee bread. This may have been the result of a very hot summer, and hence the number of bees was not large. Allowing that there was honey sufficient, there seem to be three things requisite in order to carry bees through the winter in a healthy state at the North. 1st, a queen comparatively young; 2d, a good quantity of brood in the fall, with plenty of bee-bread; 3d, a tall hive.

It may be said that the evil might have been avoided by placing in a dry cellar, with an even temperature a little above freezing, but it is doubtful if bees could stand such long confinement.

All my hives are much soiled at the entrance, even though the bees are doing well at this date, March 10th.

Has the experiment ever been tried of taking the hive into a warm room, and after surrounding it with a net, allowing the bees to fly?

Some such device, though involving some trouble, might be successful. D. C. MILLETT.

Holmesburg, Pa.

[For the American Bee Journal.]

Rape as a Honey Plant.

MR. EDITOR:—I see nearly in every JOURNAL and bee paper, a report of some new honey plant; but what is the use of experimenting with new plants when we are neglecting an old and well tried plant, one on which we can figure the dollars and cents just as well as on wheat, corn, or any other crop, As it is not only a honey producer, nor a noxious weed, as most advertised honey plants are, but is a regular farm crop, it is for several reasons the best crop to raise when a return in honey and seed is desired.

First, As a honey producing plant, the rape is scarcely second to linden, producing a beautiful golden honey of good flavor, and is in blossom when nearly everything else is out of blossom, commencing about the middle of August and continuing a couple of weeks.

2d, As a farm crop, it is as good, if not better, than wheat. The time for sowing it is from the middle to the end of June. This gives time to prepare the soil after other crops are in; or if wheat or corn should fail in coming up, rape can be sown in their places. It is harvested from the middle to the last of September, after all other grain is harvested. It does not impoverish the soil, but benefits it. From five to eight bushels more per acre of wheat are raised on ground which had rape the previous year. It allows no weeds to grow after it is fairly started, growing very dense, and its leaves completely shade the ground, therefore it does not suffer from drought like other grains.

The seed has a good cash market at Fond du Lac, Wis., where oil is extracted from it, and brings from $1.50 to $2.00 per bushel. From ten to eighteen bushels is generally produced per acre, but is oftener over than under this estimate. Two quarts is sufficient to sow an acre. Thousands of bushels are annually raised in Calumet county, and it is just as staple a crop as wheat. Those doubting my statement I refer to Report of Agriculture for 1870. If any of my brother bee-keepers wish to try the rape, send 50 cents and I will send you enough to sow an acre.

H. O. KRUSCHKA.

Berlin, Wis.

P. S.—If you consider the last sentence too much of an advertisement to publish gratis, then omit it; I don't make anything by it. H. O. K.

[For the American Bee Journal.]

A Bee-Keeper Persecuted.

MR. EDITOR AND READERS.—Having taken about 3,000 pounds of honey from fourteen colonies of bees kept in our corporation, and my neighbors erroneously supposing this was done without any labor worth speaking of (and perhaps by witchcraft), and seeing prospects for five or six thousand the coming season, these same citizens are taking measures to "boost this bee-dicker" out of town, prove the bees a nuisance, and annoy their owner as much as possible. As I expect a law-suit with the above-named gentlemen, any precedents or information on the case will be thankfully received. Have they any right to expel an apiary from a corporation, even if they should create a corporation law for the purpose? In other words, have corporation officers any right to make such a law? My apiary is quite remote from any dwelling, and the greatest complaints are from parties over twenty rods away. "The bees get into the tub and well, etc." We have a yard eight by eight rods, and our town has 2,000 inhabitants. In 1869 I kept forty-eight colonies and got no honey. That was low comedy. Last year, as above stated, was high tragedy.

JAMES WEDDON.

Dowagiac, Mich., March 15th, 1873.

[For American Bee Journal.]

Nucleus Hives.

DEAR JOURNAL:—I have been requested to give in the JOURNAL the size and shape of my nucleus hives in which I am wintering reserve queens, referred to in article on "Wintering Bees," page 175, February number. I will first describe my frames. I make them four and a quarter by seven and three-quarter inches, inside measure, top bar one inch wide, a quarter of an inch thick, and nine and a half inches long, using the same size frame for nucleus hives and surplus honey. My hives are made nine inches from front to rear (inside), five and a half inches high, and of sufficient width to take in from four to eight (4 to 8) frames, allowing one and a half inches to a comb. The size I prefer is ten and a half inches wide, using seven frames. In such I have safely wintered queens the past winter, with very little trouble. There should be bees enough at the approach of cold weather to cluster

in four spaces. To prepare such hives for wintering, the combs containing the latest brood, or empty combs in which the bees cluster, should be placed at one side of the hive, and the balance of the combs be well filled with honey, with a hole cut in the center of each comb for the passage of the bees. By having the cluster at one side of the hive, the bees work towards their stores; and when they reach the opposite side of the hive, which will be about mid-winter, three or four of the empty combs should be removed and their places filled with combs well stored with honey. If the combs are built of the proper thickness, they will contain about one pound of honey each. My nucleus swarms have wintered, to all appearance, as comfortably as my full colonies. No sign of dysentery or uneasiness has appeared, although remaining in my wintering house from the 5th of November to the 6th of February (three months), at which time they had a cleansing flight, and on the 8th of February were returned to winter quarters, where they still remain.

W. J. DAVIS.

Youngsville, Pa., March 12, 1873.

Bee-Culture vs. Bee-Keeping.

"Bee-*culture*" is to be widely distinguished from "Bee-*keeping*." The latter, if it imply merely the careless and neglectful possession of one or more hives of unfortunate bees, will invariably be found both uninteresting and unprofitable; for in this, as in all agricultural pursuits, want of care, and of that degree of skill which is sure to result from care, will lead to disappointment and failure. But on the other hand it is claimed that bees, with good management and timely attention—and they need but little of either, but what they do need they need imperatively and at the right season—can be made a source both of pleasure and profit.—*Rev. O. Lawson.*

[For the American Bee Journal.]

Sundry Items.

MR. EDITOR.—The April number is at hand, filled with good things. Permit me to make a few running remarks on it. "Novice," with his usual ability, makes a very good plea in self-defence, mentioning all he has to sell, except his monthly.

Gallup's ideas on pure fertilization are very good, but one thing more is needed: after you have made your select colony of queen, workers and drones, cut out all drone comb in the rest of the apiary, and allow none to be made during the summer; then if you are not troubled with your neighbors' drones, pure fertilization is a certainty.

Thanks to D. L. Adair for his excellent article on Italian bees. This is a subject that is occupying the attention of a great many bee-keepers. Gen. Taylor, in one of his battles in Mexico, shouted "More grape, Capt. Bragg, more grape." So we say "More light, D. L. Adair, more light."

It appears that "Novice" and Mr. Furman have at last got their challenges accepted. Now, gentlemen, no dodging; fair play; pitch in, and we will see who comes out second best.

Your first article in the March number on "Alternate Generation and Parthenogenesis," is excellent and well worth the price of a year's subscription to the A. B. J.

A short time ago Mr. King sent me his bee journal. Now, as I never was a subscriber for it, I do not see why he sent it, unless it was to draw my attention to the loss of Mrs. Tupper's bees. I confess I do not see anything in this affair that justifies a call on the public for help. I learn from the journals that there has been a great loss of bees, in many parts of the country, this past winter, and if Mrs. Tupper lost her bees by fire, I lost all mine by frost. But that is no reason why we should call upon the public for help to make up our losses, which have been caused either through *ignorance, carelessness* or *wilfullness*. To me at least there is something unaccountable in the whole affair. Why did Mrs. Tupper bury her best stocks with the choicest queens? If I mistake not, she has denounced the practice of burying bees; but this is not the only time she has said one thing and done another, and the only consideration that has saved her in the past from severe criticism has been her sex. But the last straw has been laid on the camel's back. She has long enough been made the figure-head of the "King ring," without being exposed. And, moreover, we are told, with the utmost *sang froid*, that we are more deeply indebted to her than to any other! I would like to know for what? Has she ever given a single new idea to the bee-keeping public? All that ever I could see she has done has been this—she has entered into other people's labors (like a great many more,) and reaped the benefit,

I, with yourself, Mr. Editor, and many others, felt indignant at the presumptive untruth sent out through the country by Mr. King, and would, in closing these few lines, respectfully suggest that he cut off from his name the prefix "Rev.," as inappropriate for one who deals in trickery and deception.

OLD DRONE.

Geneva, Ill.

[For the American Bee Journal.]

Foul Brood.

BY M. QUINBY.

Little has been said lately on this question in the JOURNAL. I would inquire if this is the effect of its disappearance generally through the country, or whether bee-keepers despair of finding a cure or remedy? If the first, I would like to ascertain why it has disappeared. I hardly think that its diminution can be attributed to what has been said for the last five years, although it may have contributed something towards it. Twenty years ago a chapter was published containing as clear a view of the subject as we have now. It was then traced from a diseased stock to a healthy one, like measles, whooping cough, small pox and some other diseases incident to the human family. The original cause was yet in the dark. But enough was known respecting it to suggest a remedy.

"A disease broke out among the silk worms of France which threatened their entire destruction. A man by the name of Pasteur, after making himself acquainted with the habits of the worm, applied the microscope, which revealed the fact that a species of fungus grew all through the body of the diseased worm, and the germ of this fungus was found in

many of the eggs. Without wasting time inquiring into the cause, he suggested this remedy: Destroy all diseased worms and eggs, and develop the healthy eggs under circumstances that would prevent their coming in contact with the fungus germs. In two or three years healthy silk culture was restored to France." I trust that healthy bee culture will yet be restored to our country in the same way, although we can come no nearer the original cause. The most economical remedy is yet in dispute. Mr. Alley, of Wenham, Mass., (see A. B. J., 1870,) says: "Destroy hive, bees and all by fire," with which an editorial note entirely concurs, as the only effectual remedy. I do not dispute the effect of his remedy, but it seems too much like burning an old building to prevent any of the timbers being used to construct a new one, or giving a man medicine to kill him because we do not know how to prevent his dying of fever. I have always studied economy as far as possible, and would say, if there is a stick of timber yet sound in the building, use it in reconstruction; if there is one healthy organ in the human body, save it as long as possible. If any one part of the hive is healthy or sound, and there is enough of it to pay for the trouble of saving, by all means save it from the flames. If they have honey save that. If it be fed to the bees, purify by scalding. If for the table, detach the diseased part and bury out of sight as you would a diseased, incurable limb that had been detached to save the sound one. As long as there are bees for a swarm left, save them—unless out of season—to begin anew. The mature bee is healthy, as has been fully proved, and it has been many times demonstrated that they are as good as new timber used in reconstruction. We have restored our whole apiaries to health, not having a single case in the past two seasons. I would now ask Mr. Alley if he is entirely rid of it. If not, his remedy does not prevent it. If he is rid of it, did he gain by destroying his bees? Is he any more exempt from re-infection than we are? Suppose some neighbor brings a badly infected colony almost to his very door, what will save his bees from the contagion any more than ours under similar circumstances? It is not a little gratifying to be able to say the remedy has been tested and the position proved correct. I may add that the opinion expressed twenty years ago, viz: That if no diseased bees were brought within reach of the healthy ones, it would soon die out, seems verified. There is a fair prospect of its doing so. Our immediate neighbors are not troubled with it, and I know of none within several miles around.

Seasonable Hints to Bee-Keepers.

I again intrude upon your valuable space to urge bee-keepers at this season to carefully examine their hives, and ascertain that each has a prolific queen, as well as a good supply of stores to be used in rearing brood and strengthening the army of workers for the early flowers. Any hive found with less than ten pounds of honey should be fed regularly each evening, commencing with about two table-spoonfuls, and gradually increasing to a quarter of a pound daily. Any hive found queenless, if in an old-fashioned box-hive or bee-gum, should be driven out and united with another hive; if in a movable comb hive, it can be strengthened and built up by giving a frame of brood (if sealed all the better) from another hive that is strong enough to spare it, and in about fifteen days another frame of the same kind, and again, at the end of ten or fifteen days, another frame in which there are eggs or larvæ just hatched. It may be asked, why not give a brood to rear a queen from at once. If they have been queenless only a short time they will rear a queen from the first young brood given them, but if for a long time queenless, they will not rear a queen until after the first brood given hatches; the young bees from which will rear a queen as soon as they hatch in sufficient numbers to construct queen cells, manufacture the necessary jelly, and engender sufficient heat needed to rear queens, and can obtain eggs or larvæ of the right age to rear from. Should there be a queen reared from the first brood given, the hive will need careful watching, to be certain of the queen being fertilized and not becoming a drone layer. Should she prove such, as soon as drones begin to fly, kill her and give the hive a frame of young brood and eggs, from which they will rear another queen; and in about twenty days, if the weather is favorable, there will be but little doubt of the hive having a fertile queen. A queenless colony in a box-hive can be saved, but the labor is so great that it will not pay, and it is therefore more advantageous to unite with another colony. Bees should also be fed with rye-meal (ground fine and not bolted), if obtainable, otherwise rye-flour, mixed with sawdust or fine cut straw, will answer the purpose; place in a shallow pan and set near the hives, in a place sheltered from the wind and rain. The bees will carry the flour into the hives, and use in place of pollen to rear their brood with. Those who desire to change from box hives to movable comb hives, should obtain their hives and have everything ready for transferring as soon as first blossoms become plenty. Transferring can be done earlier in-doors, or if the weather is very warm and fine, out-doors; but the bees transferred will need feeding, as they will use much honey in repairing their combs and fastening to the frames. The earlier transferring is done, the earlier will the hive swarm, which to the bee-keeper of careful habits, will more than repay the care and cost of feeding. The careless bee-keeper I would advise to let movable comb hives alone—they would not be as "lucky" to him as the "old gum," and in the end he will become convinced that "patent hives kill the bees," as many have been convinced that the mowing machine kills the grass in the meadow where it is used.—*"B." in the American Farmer.*

[For the American Bee Journal.]

Uncovered Brood.

Mr. Editor:—Page 170, February number, "Novice" thinks me certainly in error, that in revolving brood, sealed or unsealed would injure it. I hope and wish it to be no more than an error on my part of thinking so, as I stated in December, page 136, and am of the same opinion still. The proof that "Novice" supplies on page 170, March number, is convincing. See, here are large patches uncovered, and I once feared it was foul brood, or something wrong, but always came out right. I

never, as far as I have noticed, saw brood so exposed to, say the full-grown bee looking white, patches of it, and had them to come all right. The workers, removed them, and not one of them could find in one instance, that colored dark showing maturity. Mrs. Tupper is in error on the same subject. But what say our enlightened bee-keeping public to this point? Shall we have the pleasure to hear some of their experience in this matter? Or is "Novice" the only one who can prove what is believed by Mrs. Tupper and myself, on this subject, to be erroneous? It would appear that "Novice" thinks it to be from an excess of heat. Well, I have the opposite opinion. In the summer of 1871, which was remarkable for its low temperature, I had occasion, one day, (thermometer at 55°, bees flying somewhat) to sling honey from all the combs but two central ones, they being filled chiefly with brood, and every comb being operated on. They contained sealed brood, and showed patches of different sizes of brood, apparently of every stage of maturity, uncovered. Finding it thus three days, afterward, this one being the worst, in such a state, in consequence of the cold that day, in my opinion.

C. WURSTER.

Kleinbury, March 24th.

Cheap Hives.

[The following communication was addressed by Mr. Quinby to "Novice," and has been forwarded to us in accordance with the writer's instructions, as given in this accompanying note: "MR. A. J. ROOT:—Enclosed is an article on "Cheap Hives," that I would like to see in "Gleanings." If too long, please send it to Mr. Clarke, or return it to me." As "Novice" has sent it to this office, instead of returning it to the author, we presume he wishes to have it published, so that both he and Mr. Q. will be glad to see it in these columns:]

MR. EDITOR.—What constitutes a cheap hive? Twenty years ago I made hives, and used them, that cost only thirty-seven and a half cents—the hive alone—succeeded with it, recommended it to others, because I thought it the cheapest that could be made. Mr. Langstroth promulgated the movable-comb principle. The hive could not be made short of several times the cost of the one I used. Before any one adopted it, he must be persuaded that it was cheaper, must know enough about bees and their management to know what was wanted in a bee-hive—that he could make enough more with the movable combs to pay the additional expense, and a surplus besides. Can you not show that your hive costing a dollar is cheaper than the one costing thirty-seven and a half cents? Are there any further improvements possible?

Mr. Hazen patented a hive that would hold boxes to contain 200 pounds surplus. Can this be improved? I wanted the hive that that would make the most honey as well as profit. If the cost of making exceeded the value of extra honey, better not make it. But if the reverse was the case, it seems to me that the hive costing more was the cheapest, as more was left from the same bees, after deducting expenses. You recommend a hive that can be made for a dollar. Suppose Mr. Hazen recommends one that costs, with right to use, $10, and gets 200 pounds in boxes, worth twenty-five cents per pound, amounting to $50. You get 200 pounds extracted honey, worth fifteen cents, amounting to $30. Here is $20 difference. We reckon nothing for cost of extractor and labor of using it. The cheapest hive ought to be easily seen. The prices of last season would make the difference $40. Until we can raise the credit of pure extracted honey, that in boxes will pay the best. Now I want a hive that is adapted to either. Have made such a hive. Cannot make it for a dollar; yet all it costs more is more than made up by the conveniences, which make it cheaper in the end. In taking out a frame of comb, it usually is not best to lift it out from between two others, causing the irregularities to pinch, perhaps mash a few bees, and make them cross, when they will need some smoke to quiet them. This takes time—"time is money"—I wish to avoid this. If plenty of room is furnished in combs or boxes, they do not join the frames together by constructing cells between them, nor do they make cells where there is room for only one or two of half the usual depth, which, filled with honey, must be cut out, or the cells broken or mashed, exposing the honey. It took some experience with large hives to demonstrate this. Now to prevent inequalities of combs in suspended frames from pinching bees, take off the side of the hive, and take the first comb out a little sideways first; no bee is pinched. Yet when we want a comb from the middle, we must take the outside ones first till we come to it. The combs, when taken out must be put somewhere, leaned up against something, or put in an empty hive. We gain something by taking the side off before lifting them out. We make it still more convenient by taking off the end as well as side, and have the frames stand alone on the bottom board. Each one or more can be moved six inches, and stand firmly without pinching or irritating. The middle one can be moved an inch or two sideways, unhooked and lifted out; no bees disturbed. It is known that after a comb is taken out, and raised up to look at, that the greatest danger of stings is over. The light seems to confuse the bees, and they are not able to comprehend the true state of things. The black bees, as soon as the first impulse is over, run away and try to hide. The Italians remain spread over the comb without much fear. We separate the combs without a jar, with some sharp-pointed instrument, till the light affects them, before lifting a comb. Can a hive be made to effect this, without taking off the end as well as side? We work faster in this way. It takes time to subdue cross bees. We can do more work every day, and in a few days enough more to pay for fixing a hive convenient to work with, that costs more, and ever after pays a profit. Which is the cheapest hive? Again, the corners of the hive, or any box, can be held together as firmly as by nails, and held both ways equally, can be loosed as readily as raising a latch; boards forming hive are not split or spoiled in separating, as when nailed; can be used for other purposes if necessary. The hoops are metal, and will last a little over a life-time, yet the cost of such fastening is little more than nails, but may be reckoned cheapest in the end.

Then again, when bees are to be wintered in-doors, and the frames made to stand on the bottom board, as we have them, the sides and top can be taken off and piled up somewhere. The frames now constituting the hive take much less room, not more than the old box hive. I have wintered two hundred colonies in that hive, in a room ten by eighteen feet and seven deep. We can put as many in these frames in the same space. We can all comprehend that a space, large or small, well packed with bees, is warmer than one half full. The two past winters have taught us lessons in keeping bees warm that we would do well to heed.

After all, those with too little experience to know what is wanted in a bee hive, will not be profited by seeing which is cheapest.

M. QUINBY.

St. Johnsville, N. Y.

Reports, Experiences, and Opinions.

Rev. L. L. Langstroth, of Oxford, O., writes:

"Bees in this vicinity have wintered badly,—many have lost all their stocks. Owing to sickness in my family, mine were not housed until January 27th. On the morning of that day, seeing from the United States weather report, that the temperature at 10:30 P. M., the previous night, was 19° below zero at Breckenridge, Minnesota, I determined to house them. On examination, five colonies were found dead. The others, fifty-eight in all, were carried into a warm kitchen, and from that into a dry cellar. They were set out on the 6th of March, all alive and in good health, one only being queenless.

"They were fed in September on sugar syrup, none of which candied. The proportions were about 45 pounds of Coffee A. sugar to two and a half gallons of water—the mixture being brought just to the boiling point."

A. Hoagland, of Sharon, Mercer County, Pennsylvania, writes, March 19th, 1873:

"I see a brief report, in the March number, by Mr. D. M. Miller, of this county, stating that the bee business had gone up Salt River. It may be so with him, but I think if Mr. Miller would look about him he would find himself mistaken. We do not feel discouraged; I have seen darker days than the present. I have lost but five swarms in the last two years. My bees pay, even in the poorest seasons. Wake up, bee-keepers! Don't be discouraged; 'there's a good time coming.'"

E. Cobb, of Cornersville, Tenn., writes:

"Experience has taught me that young swarms should be well shaded, so as to keep the hive cool; and if it be a time honey cannot be gathered by the bees, they should be given some honey until they can gather it for themselves. The above is my treatment of young swarms, and I have lost but one swarm in ten years."

Joseph M. Brooks, of Columbus, Indiana, writes March 24th, 1873:

"I would like to ask two questions, to be answered by some of your correspondents:

First.—I would like to know some sure method of keeping the moth from dry, clean comb. I have about thirty pounds of nice comb, that has been exposed all winter to the cold, and is surely free from all moth now. As I cannot use it until I divide my bees this spring, I would like to know how to keep it until needed.

Next.—I wish to know the best plan to follow in making artificial swarms. Last year the season was a very poor one here. There have been a great many bees starved to death this winter. Mine came through all right, but I had to feed last fall. I wintered mine in my cellar; have them set out and they carrying in rye flour."

L. James, of Atlanta, Illinois, writes February 22d, 1873:

"Such fatality among our bees has never been witnessed in this section of Illinois, as the record will show next May. At the present writing, the per cent. of loss is all the way from one-half to all the colonies. Last winter we lost from twenty to twenty-five per cent., and thought this hard. The summer proved a bad one for our favorites, as the clovers, from some cause or other, failed to yield their usual stores, and as the blooms of these plants are our main dependence, little surplus honey was obtained by any one I know of. Now, in view of the vexatious attention and labor necessary in the preservation of our comb from the ravages of the bee moth, or wax worm, allow me to ask, through the medium of the JOURNAL, for advice as to the most practicable method of keeping it. Such persons as Messrs. Langstroth, Quinby, Grimm, Gallup, Marvin, etc., whose experience extends over a long series of years, can perhaps afford us the much desired information. Our request is not confined to the above-named persons, but answers will be kindly received from any one whose experience has furnished him with facts on this subject. The past two seasons have been so unfavorable for bees in this locality, that most persons are becoming discouraged and indifferent about them; and the winter which is now passing will show up such a record next spring as to require strong faith in the most faithful to persevere in a business, fraught with so much uncertainty. Yet I think a determination to master the situation will lead to success."

F. McCulley, of Friendship, Tennessee, under the head of "Information Wanted," writes:

"1st. What causes bees to die out, having a good supply of honey in both the brood chamber and honey cap? 2d. Why will bees leave their homes, with abundance of family groceries on hand, and emigrate to parts unknown? 3d. What is the cause of so many deformed bees in a hive? My best Langstroth hive, I have noticed the bees dragging out deformed bees, when that hive to-day contains nearly 100 pounds of honey. 4th. Cannot we use comb left by bees dying out, to some advantage, by cutting to fit our frames, or would the bees reject such?

"I regret to see the rising of discord between some of the best of our bee brothers. Oh, that we could communicate to each other in a harmonious style. It would be more in accordance with the wishes of all bee-keepers. We ought to nip the spirit of discord while in the bud, and not let it diffuse its obnoxious odor in our apiarian element.

"Now, MR. EDITOR, I see you complaining of dues to the A. B. J. All that I have to say is, that there

are two debts that I will be prompt to come to *taw* with, and those are my JOURNAL subscription and my poll tax. I would not keep bees without the JOURNAL, for it contains much valuable information on apiculture.

"It is an obvious fact that this pursuit is rapidly spreading through our country, and may it ever continue to advance. MR. EDITOR, we would be pleased to see the quotations of honey in different markets, in the pages of the JOURNAL, and when you make that addition, we will then pronounce the JOURNAL complete."

Eli Shulze, of Brownsville, Iowa, writes:

"Early stimulative feeding seems to be in general favor among bee-keepers; but the question arises, should it be practised in all locations? Let us see. I commence early in the spring to stimulate by feeding buckwheat flour, oat meal, and syrup. The fruit blossoms come out, and my bees make fine headway, so that by the last of May or first of June my hives are filled to overflowing with bees. Swarming commences, and by the middle of June I have quite a good increase. But here (June 1st) the yield of honey suddenly stops. Fruit blossoms are all gone, and the whole country, so far as honey is concerned, is as barren as a burnt district, except a few heads of white clover, and perhaps no honey in them. My early swarms have nothing to do but enjoy their new domicile and speculate on the probabilities of a yield of honey. With what anxiety have I watched the basswood and sumach, while my bees were stirring, especially the swarms. The basswood finally blows, about the 8th or 10th of July. By this time my old stocks are well emptied of honey, brood and bees, and my swarms reduced to a handfull. With the exception of the summer of 1871, my early swarms have been my poorest, and early feeding looks too much like a failure. The true theory seems to be, *have the greatest working force when honey is most abundant.* My conclusion is that my management has been the very worst. I have always stimulated to get early swarms, and have generally depended on natural swarming. The result has been the same in every case (except in 1871), so there is something wrong somewhere. I think I will swarm my bees artificially this season. Will Mrs. Tupper explain her method of artificially swarming? Will Mr. Moon tell us when he takes a comb or two from each stock, with which to make his swarms? Does he fill up with empty comb, or simply put in empty frames? If so, will the bees (having the swarming fever) be likely to build drone comb? To conclude in regard to feeding, if I fed I would feed for a purpose. If my main dependence was on fruit blossoms, I would unite my stocks in the spring; if on white clover, I would stimulate early; if on the basswood, I would wait until the last of May or first of June."

F. E. Sibley, of Victoria, Texas, writes; "I have read this journal for several years, and consider it has greatly improved under your management. I think very favorably of the "Benedict plan of pure fertilization," endorsed by Mr. E. Gallup. I intend to adopt it myself.

I have seven (7) colonies of Italian, and thirteen (13) common black bees, which I am going to Italianize this season. My first swarm issued on the 18th March, very unexpectedly, after which I adopted the artificial mode.

I find the Italians proof against the moth and webb worm, which have been very prevalent in this section, and which (until my success) has caused people to abandon apiarian pursuits. The old box hive and gum were all the rage until I introduced the Langstroth Patent, which has instilled new life into the enterprise. We Texas people hardly know what wintering bees means. Such a thing is unnecessary here, as there are but few days in the year so cold that the little pets do not venture out. I do not keep bees for profit pecuniarily, but for the great pleasure and recreation it affords.

[For the American Bee Journal.]

Importation of Italian Bees.

REPLY TO D. L. ADAIR.

I am glad that the delay caused to my departure for Italy allows me to read the above mentioned article, in the A. B. J. for April, and to write an answer.

In that article General Adair makes himself a reporter of the gossips that took breath during the last N. A. Bee-keepers Convention, concerning my last voyage to Italy, by insinuating that Mr. H. A. King was perhaps interested in the *venture.*

Mrs. E. S. Tupper had come to my place in the winter of last year. During the conversation, we talked about the importations of Italian bees, which were far from being cheap. The last importation had cost me $62, and gave me but one living queen. We deplored thsee difficulties, for we had both derived a great profit from the introduction of imported bees in our apiaries, the new blood giving more vigor to the bees. We both desired to get about 100 queens, so as to avoid the inconveniences of in-and-in breeding, to which the bee-keeper is subject when he has but few queens to breed from.

A few days after this, the idea of going to Italy myself suggested itself to me. I wrote Mrs. Tupper, proposing to her to associate with me. This association was formed, and as the Italian Bee Company was better situated for the sale of bees than I was myself, my business being mainly honey-raising, I consented to allow them to sell all the queens, provided they should pay all the expenses of advertising. But we were to divide the profits and losses.

At my arrival in New York the queens were unpacked in the office of the *Bee-Keepers' Journal.* The quantity of living queens being far from sufficient to fill all the orders, we resolved (following Mr. King's good advice) to send one queen to each one of those that had ordered six or less. A firm that had ordered thirty received six, and our own orders (Italian Bee Company and myself) were reduced in the same proportion. Some orders were entirely suppressed, on account of the distance, or the cold, that would have endangered the lives of the queens. This determination was the most equitable way of solving the matter.

Then Mr. King bought from us (from our own shares) ten queens, and paid for them twenty dollars ($20) apiece.

This is the only connection that Mr. King had with us in this affair. If Gen. Adair doubts of this, I am ready to communicate to him the contract that was signed by Mrs. Tupper and Savery and myself.

If Mr. King offered a resolution of thanks to our association, for our efforts in importing queens on a large scale, without having given me any notice of it, it is probably because he thought that we had tried to render a service to the bee-keeping community, as I believe myself. Why should Gen. Adair seek for another motive? and what need is there to occupy anew the public with this insignificant motion?

Let me now come to a more serious subject. Gen. Adair recognizes that the importation of Italian bees has been beneficial to the people of the United States. But in the enumeration of these benefits, he omits the now uncontested fact, that these bees have qualities not found in other varieties. He even contests their existence as a race, because I spoke of bees more or less dark-colored.

By this difference in color, I mean that, in some parts of Italy, the bees have their yellow rings bordered with broad black bands; and those are what I call darker bees. In other parts, the black bands are narrow; these are what I call lighter-colored bees.

But in all the parts of the peninsula that I have glanced over, I have not found a bee that I could call hybrid; that is, having but two yellow rings; or falling off the comb, as do the black or the hybrids; and, to me, there is not a better test of purity. And when I say yellow, I do not mean orange-colored, but leather-colored.

My letters from Italy have been written under my first impressions, and drawn from what I saw at first sight, and from reports more or less true or interested, that came to me from all sides. Afterwards, when I drew a conclusion, I was forced to admit that I had not seen any hybrid bees in Italy, and that hybrids do not exist on the other side of the Alps, either; so that there can be no crosses unless bees should be imported from one country into another.

Mr. King reports that he found in Hruschka's apiary, two stocks in two hundred that could be called impure. Hsruchka answered that they might be impure, as he had received them from other parties. I had read this before starting. When in Milan, I enquired of some members of the Society of Apiculture about it it. They said: "Our friend Hruschka is always experimenting; you know that he tried to tame hornets, and that he exhibited a nest of them at the exposition of Nuremberg. He imported two or three black stocks in his apiary, for experimenting, and it will take several years before this little black blood be absorbed by the Italian races. Mr. King, who does not speak Italian, has probably misunderstood the explanation given him by Hruschka."

If Gen. Adair had deferred his article, he would have seen that, in the same number, I answered almost all his questions, as to the difference that I had noticed between the bees of the plains and those of the mountains. In his "Annals of Bee-Culture," for 1869, Gen. Adair speaks of five or six different varieties of bees existing in the United States, besides the Italian and Egyptian races. He says: "In other parts of the country I have seen variations as distinct; within twenty miles from where I write there are three distinct varieties, easily distinguishable by sight." * * * What does that prove, if not that the importations of bees were brought from different parts of Europe?

In France, only, I know of two or three different varieties of the common bee; some gray, (the common bees are called *abeilles grises* in France), others black, others with yellow hairs on the thorax. But all these varieties do not form different races, but *sub-groups* of the common black bee. In a field of white clover you will find some blossoms almost entirely pink. Does that difference prove that it is not white clover? Besides, if within twenty miles, in Kentucky, there are three distinct varieties of common bees, is it astonishing that at a distance of fifty miles, bees that are separated by lakes, rocks and mountains show slight differences, the slow crossing that takes place, being annihilated by the influence of the climate, that has first produced these differences. Then if the climate has had the power to modify the color, character and activity of the bees, is it not probable that the best bees will be found in the place where these modifications will be more marked?

This is why I am ready to return to Milan, to bring in my apiary bees from Lombardy; for these bees are superior in beauty to those of Tessin, Tyrol, and Piedmont.

As to the importation of more bees to the United States, according to Mr. Adair, it is useless, *if not injurious*. But he would be greatly embarrassed if I asked him why?

When Mrs. Tupper came to my place, she said she desired to buy from me fifteen or twenty stocks of bees. Then, after having seen my bees, she asked me to sell her fifty or seventy-five stocks. She had probably been struck by the regular beauty of my bees. This regularity was caused by the great number of my importations. I believe that no American bee-keeper has ever spent as much money as I have in importations. It is true that each of my imported queens probably cost me over $20. But no matter; I do not regret this outlay, as I have thus obtained more regularity in the color of my bees.

If we had contented ourselves with the few queens of Mr. Parson's importation, as Gen. Adair suggests, we would certainly be now disgusted with Italian bees, and would call them a failure; for no race of animals is more averse to in-and-in breeding than the honey bee. Amongst horses, the strongest is always the head of the herd; this shows that consanguinity has no bad effects on horses; otherwise nature would have provided for it. In bees it is not so. The queen, having to go out of the hive to meet the drone, it seems that nature demands the crossing; and it is so; for every observing bee-keeper has noticed the inconvenience of consanguinity.

CH. DADANT.

Hamilton, Ill., April 6th, 1873.

PASTOR KLEINE suggests as a subject worthy of the attention of bee-keepers, an inquiry into the nature and source of the chyme or food material by which the young brood of the bees are nourished. Is it a natural product from the body of the bee, or is it a mere mechanical product of digestion?

THE AMERICAN BEE JOURNAL.

Chicago, May, 1873.

REMOVAL.—The office of this journal is removed from 146 Madison street to 25 West Lake street, Chicago.

Attack on the North American Bee-Keeper's Society.

Mr. King in the April number of his two bee journals, bestows a severe and undeserved cudgelling on the above-named Society. We cannot quote his article in full, but the main points in it may be summed up briefly, as follows:

1. "All *first* efforts are more or less futile, and the history of the N. A. B. K. Society furnishes no exception to the rule. Although it has been in operation three years, its organization is still incomplete and inefficient."

2. Attendants "assemble without any definite objects or aims;" "questions are proposed for discussion which no one but the proposers have ever investigated, perhaps;" and the discussions are unfit to "go out to the world as the profound opinions of America's best apiarians."

3. "Compare our records with those of the German societies, and how we suffer by the contrast."

4. "Let the committee of arrangements appointed at the last session go to work at once, and assign definite subjects to competent persons."

The foregoing are merely the "heads of discourse," and are enlarged upon more or less fully. We have a few criticisms to make on this piece of gratuitous fault-finding, and propose to take up the several points in their order.

1. Whatever may be true as to the alleged futility of "all *first* efforts," even granting that to be as claimed "the rule," we boldly deny Mr. King's assertion concerning the N. A. B. K. S., and affirm that it does furnish an exception. Considering its brief term of existence, it has been, to a gratifying extent, a success. Mr. King says, "it has been in operation *three years*." We are astonished at this statement, coming as it does from the Secretary of the Society, who has the records at hand, and being supposed to speak "from the book," ought to be accurate, not to say, truthful. The Society was organized at Cleveland, in December, 1871, and therefore is not yet half the age represented. Even if its birth be dated from the organization of the two Associations, whose consolidation, happily effected at Cleveland, formed the N. A. B. K. Society, it will not be "three years" old, until the latter part of December, for one of these bodies met in Indianapolis at that period of 1870, and the other met in Cincinnati, in February, 1871. But, as a matter of fact, the Society had been in operation *less than sixteen months* when Mr. King's article appeared in print, affirming that though three years old it was a futile affair. So much for the accuracy or truthfulness of the complainant.

Now, what has the Society accomplished? Well, it has united the Bee-Keepers of North America in one fraternity for the promotion of apiculture. Commencing "away down East" at Maine, it has drawn a cordon of unity around the "stern and rock-bound coast of New England," the "Sunny South," the "Pacific Slope," the home of the "Latter Day Saints," the "Great North-west," and the "Dominion of Canada." This is no mean achievement, especially in view of the threatening rivalries apparent at the Indianapolis and Cincinnati meetings, which were hushed to sleep,—the sleep of death, to all appearance, at Cleveland.

We fail to see wherein the "organization is still incomplete," or its practical working "inefficient." While making these charges, Mr. King neither furnishes illustration nor proof of them. Wherein is the Society "incomplete?" Are its Constitution and By-laws defective? Does it require more officers? Wherein is it "inefficient?" Is not the machinery well enough fitted to do its work, if properly operated? We have been at all the meetings, and can testify that they were interesting, pleasant, and profitable. Such we believe to have been the general opinion. Probably the Society has not accomplished what Mr. King had in view, and to secure which, he prevailed on certain parties to attend, by promising to pay their expenses; but individual disappointment is no evidence of organized inefficiency. The Society may have failed to achieve narrow ends, just because it has achieved broader ones. It may have overlooked "number one," in its anxiety to do "the greatest good to the greatest number."

2. It is a downright libel on the large and intelligent bodies of bee-keepers that have met in the name of the N. A. B. K. S., to say they "assembled without any definite objects or aims." They met to form or foster acquaintance with distinguished apiarians whom they had long known through their writings, and with one another generally. They met to promote a common interest, and to glean information about a favorite pursuit. They met to compare notes and experiences. They met to inspect hives, extractors, bee-feeders, non-swarming attachments, artificial comb, and whatever else might be on exhibition.

They met to expose humbugs, and consider ways and means of banishing old-fogy bee-keeping, and establishing enlightened and scientific bee-keeping everywhere. If these are not "definite objects or aims," we are at a loss to know what deserve to be so called.

As for the questions propounded for discussion, they have been for the most part very practical ones, and we do not recollect any instance, in which parties have asked them to display their own wisdom, as insinuated. The discussions themselves are by no means discreditable. We have met with no disparaging criticisms on them, except those of Mr. King, and any one who will examine the minutes with a view of ascertaining how much wisdom he contributed to the common stock, will set this down as a notable instance of "the pot calling the kettle black."

3. It is no disgrace to us that we have to own the superior eminence of our German brethren, as apicultural investigators. "Honor to whom honor." To grudge the acknowledgment of well-earned superiority, is very small-minded.

4. The Secretary of the N. A. B. K. S. ought to know his own duties, and the duties of committees, better than to give the advice contained in his closing paragraph. The Local Committee of Arrangements has other business than to assign subjects for discussion, and the like. Its duty is to provide a place of meeting, make terms with hotels and railroads, see that proper local publicity is given to the meeting, and things of that sort. Mr. King maps out the work of the Executive Committee, of which as Secretary he is the most responsible member, and shifts it on to the shoulders of the Local Committee. This will not do.

Go to work yourself, Mr. King, if you want the next meeting to be a grand success. Digest a plan, forward it to the Corresponding Secretary, and let him write to the other members of the Executive Committee about it. Choose a topic you feel "able to discuss *learnedly*," and get up a paper that will convince even German apiarians that their American brethren have "profound opinions." Who so proper a person as he whom they delighted to honor, and he who has taken upon himself the office of Critic-General and Supreme Judge of American apiarians? We stand ready to do our "level best," and "little all," notwithstanding the ungracious fling about "forestalling discussion" in the closing paragraph of Mr. King's article. So do many more. Timely official action is all that is needed. Half as much written from the Secretary's desk as has emanated *ex cathedra* from the editorial chair, would have accomplished far more for the welfare of the Society. But we fear this is not the object really aimed at. Unable to use the Society for his own ends, Mr. King is intent on doing it damage; though from his official position, it is a species of treason. The Secretary of a society is its most responsible officer. On him, more than upon any other, its efficiency and success depend. Be loyal and faithful to the trust committed to your hands, Mr. King, and "our word for it," *all will be well.*

Shall I go into Bee-Keeping?

BY THE EDITOR.

We are vain enough to think that our former article on bee-keeping may have inclined not a few readers of it to entertain the idea of keeping bees. But there is one great and terrible hindrance which meets beginners at the very outset, and often effectually deters them from the contemplated undertaking—it is the *fear of being stung.* Many own this, and others who are too proud to own it are nevertheless influenced by it.

Now, it is no mark of wisdom to make light of a bee-sting. It is no joke. A mosquito-bite, or if you can imagine it, fifty mosquito-bites in one, are as nothing to it. The bee not only inflicts a wound, but injects a poison. This poison is very subtle and virulent in its nature. It has a peculiarly potent effect on some people. A bee-sting has been known to cause death, when inflicted in a highly sensitive part of the body of a delicately organized person.

Thus much admitted, let a few considerations *per contra* be urged. In the *first* place, there is far less danger of being stung than most people imagine. The idea that every bee you hear buzzing around you is intent on plunging its dagger into your quivering flesh, is preposterous. The ordinary buzz of a bee is its song of labor, an audible proof that it is intent on work, not on mischief. A bee rarely stings except as the result of injury or provocation of some sort. If interfered with in any way, and particularly if irritated, squeezed or crushed, it is pretty sure to sting. Like a Scotchman, the bee has for its insignia a thistle, and for its motto, "*Nemo me impune lacessit.*"

Secondly, there are simple precautions to be observed in all operations amongst bees, by which all danger of being stung may be obviated. Ordinarily a quiet self-possessed behavior amongs bees ensures safety. All sudden movements are to be avoided. Bees are excessively nervous insects. They get excited in a moment. Gentleness must be practised *always.* If they raise a warning note of anger, or dart towards you threateningly—the usual indications of a disposition to sting—the best course is to stand perfectly still, bending the head forward to

protect the eyes, as strange to say, bee practice is the same as pugilistic, to *hit in the eye*. With the head bent forward, there is really very little of the face or body exposed to a straightforward attack, and such only bees make. It should be a fixed purpose *never to strike at a bee*. Only an experienced and cool bee-keeper can ever do that safely, and even such at times make a miss and get the worst of it.

A perfectly self-possessed and skilled apiarian can sometimes get rid of immediate annoyance by the sacrifice of a bee's life, but even this is not a practice to be commended. A bee struck at becomes infuriated, maddened—and returns to the onslaught, determined to "do and die." But we recommend all beginners to arm themselves with a veil and a pair of sheepskin gloves, when they have occasion to meddle with bees. The veil must be a close one, for these are prying little insects, and when they alight on a veil will crawl and crawl, hither and thither, and if there be an opening, are pretty sure to find it. A bee, however peaceably inclined, will sting when it finds itself in a "tight place." Those who keep apiarian supplies for sale have suitable veils, and as for gloves, there is nothing better than those used in harvest-time in handling grain infested with thistles.

Thirdly, modern apiarian science has discovered a short and easy method of taming or subduing bees. A few puffs of smoke from a bunch of burning rags, a pan of chips, or a bit of rotten wood, will usually quiet a colony of bees so that it can be handled with impunity. The explanation of this is that the smoke excites a slight panic in the hives, so that the bees at once fill themselves with honey, and when gorged with honey they are disinclined to sting.

Fourthly, most people, after being stung a few times, come to think very little of of a bee-sting, the pain and irritation being much less than at first.

These considerations ought to suffice as an antidote against the fear of being stung. If they do, and the determination is formed to go into bee-keeping, this advice should be followed:

1. Do not rush in hot haste into this pursuit. Read up in regard to it. Master the first principles of the art before you get a hive of bees. Be content to begin in a small way, and take time to gain experience. One stock of bees is ordinarily enough to begin with.

2. Obtain, if possible, a colony of bees in a *movable frame* hive. Bees have been kept profitably, and may be still, in straw or common box hives, but to attain the best results, a movable frame hive is necessary; with this there is access to the bees, and perfect control over them. With this, more may be learnt about bees in a single season's observation than by keeping them a dozen years in straw or box hives. Such a hive can easily be obtained from some of our leading apiarians. A stock of common bees in such a hive will cost about ten dollars, inclusive of patent right.

3. Do not expect sudden and wonderful profits, nor be discouraged by reverses at first. There is no speculation in bee-keeping. Nevertheless, after some years' experience, we firmly believe there are few directions in which a little time and money can be more judiciously expended. To be successful, however, will require diligence, care, energy, and perseverance.—*From the Canada Farmer, Feb. 15th, 1873.*

Exploring Bee-dom.

BY THE EDITOR.

If the beginner in apiculture has taken our advice, and begun to read up in relation to the nature and habits of the bee, the result will be a great curiosity to verify some of the wonders of the hive by actual inspection. It may be safely affirmed that if no such desire be felt, there is no call to bee-keeping. You may be cut out for a gardener, an angler, a poultry fancier or a sheep-raiser, but you are not cut out for a bee-keeper unless reading on the subject fires you with a strong desire to see the inside of a hive.

With a movable frame hive this curiosity can easily be gratified, and a vast amount learned about these remarkable insects in a very short space of time. We will suppose that the reader, having determined to begin as a bee-keeper, has purchased a colony in such a hive. It is bought in the early spring, when the risks of wintering are over, and brought from a sufficient distance (at least three miles off) to prevent the bees, from their memory of localities, going back to the old apiary. There stands the newly acquired treasure, in a spot chosen for the season, beneath some not over thickly foliaged shade or fruit tree, where it can have at least partial protection from the fervour of the noonday summer sun. You have watched, at first at a respectable distance, and then somewhat nearer, the goings out and comings in of the busy little workers, during those early spring days which were warmer than usual. The only peculiarity about them that you have noticed has been that quite a number of them, on returning to the hive, have their thighs laden with a yellowish or reddish looking substance, concerning which you have said to yourself, with a sense of inward pleasure, "That's honey." Well, it isn't honey, but it is something just as essential to the well-being of the colony, as we shall see presently. Your out-door observations increase the curiosity which has been awakened by your in-door readings. Now for its gratification. But be sure to follow the directions about to be given, whether you can see the wisdom of them or not.

Choose an hour toward midday, when the weather is warm and pleasant, and the bees appear to be in rollicking good humor, making the air resound with their musical humming. Put on the close fitting veil and sheepskin gauntlets described in a former article. Get smoke of some kind, and gently blow a few puffs in at the entrance of the hive. Hark, and in a few seconds you will hear a peculiar buzzing, which you will by and by learn to recognize quite readily. It signals you that the smoke has taken effect. That's enough. Don't over-do it. Bees can be annoyed and angered by an overdose of smoke.

Wait a few minutes. The smoke has created a slight panic in the hive, and the bees instinctively fly to their chief treasure, the honey, and load themselves with it. In that state, they are indisposed to sting. A bee filled with honey is like an Englishman after dinner—very good-natured. You may now proceed to open the hive, doing everything very gently and quietly, for bees are as nervous as people who drink strong green tea thrice a day. The least sudden movement gives them a start and puts them on the alert. Having taken off the outer covering of the hive you come to the honey board. This is fixed fast with propolis or bee glue. Bees are not loose in their habits. They want everything strong and solid, and so they gather and prepare a resinous material, which they spread on in a sort of viscid state, but which gets hard like sealing wax, except in the very hottest weather. But it is as brittle as sealing wax, and the point of a knife will usually loosen the honey board in a moment. Now lift off the honey-board carefully, and set it by the side of the hive, near the entrance, in order that the adhering bees may, if they wish, readily re-enter the hive. At this stage you will feel rather nervous most likely, especially if the bees should rush out at all, as they sometimes do. But keep quiet, take your time, blow a little smoke across the top of the hive, and down between the frames. This will still them. The frames are glued fast, as was the honey board, and must be loosened in the same way. Be very careful in drawing out the first frame. Make an opening for it by gently pushing the frames on either side. Fix it as a rule not to crush a single bee if it can be avoided. Having thus drawn out a frame from about the centre of the hive, begin to examine it. Of course the bees first attract your attention. Most of them, perhaps all that you see, if it be early in the spring, will be like the one shown in this cut.

These are the *workers*. They are undeveloped females. On them all the labors of the hive devolve.

Later in the season you will notice, on opening a hive, a proportion of larger bees. They are portly looking, aldermanic insects, each with a jolly corporation of his own. There is no difficulty in identifying them. The accompanying engraving shows how they look. They are "the lazy fathers of the industrious hive." They perform no toils, and lead a life of pleasurable idleness.

If you look sharply you will perhaps be fortunate enough to find the queen. But she is modest and retiring, prone to hide in little knots of workers, and seems to take pains to elude observation; sometimes, however, she walks forth, with a slow and stately step, and with a sort of majestic air, which proclaims her "every inch a queen." Novices are very apt to mistake some drone more slender than his fellows, for the queen. This cut will aid in her recognition.

Her wings are short, her body long and tapering, and her movements peculiar.

As you proceed with your inspection, you will observe many cells containing a yellowish or reddish substance. This is *pollen*, the food of the young bees. You took it for honey as the workers were carrying it in, but it is not much like honey here in the cells.

It will strike you that the honeycomb is not all of the same size, and on careful observation, you will see that there are two sizes of cells; the larger size is known as drone-comb, and the smaller as worker-comb. The drones are raised in the one, and the workers in the other.

Peering into these cells you will notice little white things coiled up in them. These are the grubs or larvæ. If you search narrowly you will see at the bottom of many of the cells, little white specks about the shape of rice grains. These are the unhatched eggs. They are all laid by the queen, who is the mother of the entire progeny. It is very interesting to note the egg, the newly hatched grub, and all the various sized grubs, up to those that look so big and fat that the cells can hardly hold them. You will notice also many cells closed up, "sealed over," as bee-keepers say. These contain the young brood in the last stage of development, and if you watch closely you will see some of them who are mature eating their way out of prison, into that world in which they are to play such an active part.

This is a sufficiently long exploratory tour for the first, in the hitherto (to you) unknown realm of bee-dom. It has, to some extent, satisfied your curiosity. It has proved that you can handle bees without being injured. It has given you an insight into bee-life. It has opened to you a world of wonders, into which you will take many a journey, and, if you are a devout student of nature, you will exclaim often, as you behold the revelations of insect art and skill: "Great and marvelous are thy works, Lord God Almighty; IN WISDOM HAST THOU MADE THEM ALL."—*From the Canada Farmer of March 15th, 1873.*

The Lessons of the Past Winter.

BY THE EDITOR.

Our average winters are sufficiently hard and trying, to make bee-keeping a matter of difficulty, demanding the most careful and judicious management. But such a winter as we have just experienced is an ordeal which comparatively few apiarians are able to endure. It is a crucial test of the stuff they are made of.

Quite a number of bee-keepers will, after such a season, abandon the pursuit in disgust, and pronounce it a humbug. In travelling through the country the coming summer, observant persons will detect many deserted apiaries and depopulated hives, and on making inquiries, the often-repeated reply will be, "O! bee-keeping is played out;" or "This climate is too hard for bees."

We are in a position to form an estimate of the general state of the bee-business, and the general characteristics of bee-men. That there have been immense losses sustained from one end of the country to the other, is undeniable, and that this fact will have the effect of utterly discouraging many bee-keepers, is equally undeniable. The echo of their discouragement is already making itself heard through a portion of the agricultural press, who can only find one interpretation of the winter's teachings, and that, "Let bee-keeping alone." But it is only a certain class of bee-keepers who are disheartened. It is the negligent, easy-going, partially informed and half-hearted class, those, in fact, who are unwilling to be at the necessary cost of time, trouble and outlay, to master their business. Perhaps it is well these should be discouraged. An element of faint-heartedness is better got rid of out of an army, whether of soldiers or bee-keepers. It is very certain that while the class of bee-keepers just referred to, read the lesson of the winter in the one little word "QUIT;" another and a better class read several lessons, which combine and coalesce in the word "PERSEVERE." Some of the lessons of the winter may be briefly stated:

1. Extensive loss may usually be traced to neglect or oversight of some sort. A small leak will sink a large ship, and a small oversight will ruin a large apiary. For example, the cool fall weather sets in, Jack Frost appears on the scene, but it is early in the season, Christmas is yet far off, the bee-keeper is very busy, perhaps called from home just when some sudden cold snap comes; the bees are in the condition they were during the summer, not fit for out-door wintering; they become chilled, but though they receive after care, it is too late. Or perhaps the bees are put into their winter repository in good season enough, but it is too early to close them up for the winter; they are left open and exposed until a sudden dash of winter makes a raid upon them. Our experience is that a chilled hive is like a frost-bitten limb, peculiarly sensitive to cold all the rest of the season.

2. In order to successful bee-keeping, it is absolutely necessary to read a good bee-journal, so as to profit by the experience and views of others.

3. Stocks must be wintered according to their strength, and put into certain conditions corresponding with the manner in which they are to be wintered. It is naked folly to leave weak stocks out of doors; they may have a chance for life if early and snugly housed, but left on their summer stands they have not the ghost of a chance. Stocks left out must be strong and well protected. Those put in-doors require attention that the temperature and ventilation may be right.

4. The need of more careful experimenting in regard to the best methods of wintering bees. Cannot some plan be devised, by which every colony shall have a warm-up, a dry-out, and a flight sometime in mid-winter? We have thought a closet or cage of white net in a warm room would answer the purpose. It strikes us that if their imprisonment could be shortened, and an opportunity given them to discharge their fœces outside the hive, the mortality among them, even during the coldest winters, would be vastly less.—*From the Canada Farmer of April 15th.*

A Fit of Rhyme.

W. W. Parks, of Clay Banks, Mich., has had a visit from the muses, and gets off the following poetical effusion. We presume it was the contemplation of some handsome Italian queen or other that set the crank going:

I.

"O, beautiful queen,
Why are you seldom seen?
And shut up in a box,
Like a cricket in the rocks?

II.

"Like Noah in his ark,
Always living in the dark,
Always in a quiet mood,
Tending carefully your brood.

III.

"While the workers are away,
Gathering honey all the day,
You're always at home,
Traveling o'er the snow-white comb.

IV.

"While the workers bring your food,
You fill the comb with brood.
Then farewell, my pet,
Keep in the hive, out of the wet."

We suppose that poets, especially young ones, are to be allowed considerable license, but we must remind our friend, "W. W. P.," that Noah wasn't condemned to darkness, inasmuch as he was directed to make a window in the ark. The necessities of the rhyme, no doubt, led to this mistake, as in the case of Marjorie Fleming, who wrote some lines on the death of a favorite cow, and said:—

"She was killed by a splinter,
In the middle of winter."

But truth compelled her to state, in a note, that it didn't happen in winter, in fact it was along some time in spring; but "winter," was the only word that would rhyme with "splinter."

Cross Italians.

Mr. C. Wurster, of Kleinburg, Ontario, writes us a very interesting account, rather long for publication, of his experience in Italianizing. He bought a queen warranted pure, but her progeny were so irritable he could do nothing with them. Suspecting that they were hybrids, he returned the queen to the breeder of whom he bought her, and received another, who seemed very feeble, and after laying a few eggs, disappeared, the bees proceeding to build queen cells on the small piece of comb containing the missing queen's eggs. He expects

to receive another queen from the breeder he dealt with, but feels rather discouraged at the result of his $6 investment, and, on the whole, thinks he prefers the black bees. We have no doubt the cross colony were hybrids. Most people who have had any experience in Italianizing have had just such stocks. But that pure-bred Italians are more pacific in disposition than the common black, is a well-established fact in apiculture.

HINTS TO INEXPERIENCED BEE-KEEPERS.—In response to requests from several correspondents, we insert in our present issue some articles adapted to beginners in bee-culture. They were written for the *Canada Farmer*, a journal we formerly edited, and to which we still contribute, but will be just as useful to the tyro as though they were indited expressly for these columns.

Extravagant Praise Toned Down.

In our article last month on Mr. King's appeal in behalf of Mrs. Tupper, we quoted a piece of over-done eulogy just as it appeared in the printed slip sent in advance, and which we declined to publish. It read "one to whom apiculture is more deeply indebted than any other." But lo! when the journals appeared, the superlative laudation was wondrously modified, and the sentence read thus: "the woman who has done more to advance the cause of apiculture, than any other who ever lived." We fear lest some who have read the appeal as ultimately published by Mr. King, may have supposed that we mis-quoted the passage. The fact we have stated will show that we did not.

The British Bee Journal.

We are indebted to the courtesy of Mr. R. Symington, of Oxenden, Market Harborough, England, for a prospectus of a new apicultural monthly, just commenced, and entitled "The British Bee Journal and Bee-Keepers' Adviser." It consists of sixteen imperial quarto pages, is printed on toned paper, from an entirely new fount of type, and embraces in its design, illustrations of the highest character. The subscription price is ten shillings and six pence sterling, about $3.50 American money. Correspondence and remittances must be addressed to Mr. C. N. Abbott, Bee-Master, Hanwell, W., England.

The Bee-Keepers of North America, will, we are sure, hail, as we do, this indication of apicultural progress in Britain, and join with us in wishing the new enterprise great success. We hope also, that some, at least, among them, will indulge in the luxury of subscribing for the *British Bee Journal*. Those wishing to do so, can purchase sterling exchange to the requisite amount of some banking-house, or buy an international Post Office Money Order.

Mrs. Tupper's Loss.

We have received letters from leading bee-keepers, and highly responsible parties, entirely approving and sustaining the ground we assumed last month concerning this affair. Further information compels us to take back the admission that Mrs. Tupper may have sustained even a "trifling" loss. On the contrary, we now believe that the fire was a gain to her, and that the insurance amounted to more money than any experienced bee-keeper would have given for her whole apiary when it went into winter quarters, including the choice stocks with imported queens buried out-of-doors, and the unburnt hives that are still on hand. Under these circumstances, a pathetic appeal for aid from the public, such as appeared in Mr. King's journals for last month, should be frowned down by respectable journalists and honest bee-keepers all over the land.

Rev. L. L. Langstroth.

We have received a private letter from the above named gentleman, dated April 25th, 1873, part of which we take the liberty of publishing, as it relates to matters of general and public interest:

"It was my intention to furnish something for your May number, but the pressure upon my time would not permit. I fear the public will think me very remiss in not having long before this prepared an obituary notice of my dear friend, Mr. Colvin. At the time of his death I was so prostrated in health that I attended to no business of any kind whatever. Indeed a month or more elapsed before I even learned that he was dead. Then followed the illness and death of my dear wife, and shortly after her funeral I was obliged to make a journey east. The ill health of Mr. Otis preventing him from doing anything further in his suit against Mr. King, I was at once compelled to take the laboring oar, or have the case postponed till another season, and perhaps indefinitely. You can well understand, after all the pledges that have been given to the public that this suit should be pressed to a decision, my first duty was to give it the necessary attention, even to the neglect of my private affairs. No one who knew Mr. Colvin and the relations between us will ever imagine that I could neglect so obvious a duty as to give fitting expression to his worth as a man and his earnest service to the bee-keeping public; and as soon as possible, if life and health are spared, I shall discharge this sacred duty. I hope that the dear JOURNAL will prosper more and more.

"My bees are all doing well. The prospect now is that the suit will be tried in June next, before

Judge Swayne (at Cincinnati,) of the Supreme Court, and no better man could be desired by any honest patentee. I think that by your next number I shall be able to furnish you some memorial notice of Mr. Colvin, and *perhaps* something on bee matters."

[For the American Bee Journal.]

Information Given.

Vol. VIII, No. 10, page 229, H. W. Davis asks "Who knows" about the Merino Buckwheat? It is good for nothing for bee-forage, and produces neither honey nor pollen. Moreover it is one of the worst weeds that could be got into our western soil. Having raised hundreds of bushels and ground thousands, I ought to know. E. GALLUP.

Orchard, Mitchell Co., Iowa.

P. S.—Weather cold and hard on weak stocks of bees. E. G.

April 14th, 1873.

[For the American Bee Journal.]

Honey Jars.

MR. EDITOR:—"Novice" thinks honey jars a bother when one is obliged to get over a barrel of honey out of the jars again, after they are nicely labeled, &c. That is very true. But it may not come amiss if I tell my way of handling my machine-extracted honey, as I think it gives less trouble than any other way I might adopt. I keep my bees on the roof of my house; the honey-slinger, friend Stephenson's manufacture, stands in the garret, and holds eighty to one hundred pounds of honey before the honey touches the cylinder. When pumping, I have it as near full as possible before I commence to draw the honey off, so that small pieces of comb and other impurities have time to rise to the top. With this method the honey needs but little skimming. I have two dozen tin honey buckets, which hold fifteen to twenty pounds apiece, with covers to keep flies out, and spouts to have an easy filling of the jars. Four of these buckets fit in a tin pan, which is half filled with water, and gradually heating on the stove, the water comes to a boil, and with it the honey, which is now skimmed and set on a table to make room for four other buckets.

When the honey in the first buckets has cooled off some, there is another little chance for skimming, after which the jars are filled, corked and set on the shelf until they are wanted. Next season I shall cap them all before setting them away, as the tinfoil can easily be washed off when soiled, (not so with labels,) and as it serves a good purpose. One of my neighbors had, as he stated, ants eat through his corks and spoil his honey. I had only two jars spoiled by a very little insect getting in the honey through porous corks. Tinfoil caps would have prevented it. As labels will be soiled by flies and dust, I cap and label only a lot of jars at a time, or at least this is what I have done so far. When the honey candies in the jars in winter, I set a tin pan on the stove, half filled with water, and fill it with the jars of crystalized honey, laying thin strips of boards under the jars, so as to keep the glass from coming in contact with the hot tin pan, and loosen the corks. By the time that the water comes to a boil the honey is as clear as ever; it is then re-corked, capped, labeled and ready for sale. I have dissolved hundreds of jars of crystalized honey in winter, by setting them in the water-kettle on the stove in the store, without removing the tinfoil cap or loosening the cork, and I don't remember of ever having broken a jar, only the label, of course, is spoiled.

It is quite a job to jar a barrel of honey at a time, and to do so five or six times in a year. I should prefer to do it all at once while I am at it, and in the honey season. The dissolution of crystalized honey is a very easy matter indeed, and can be done best in a glass jar by setting it in hot water, as I have proved above.

In regard to the honey oozing out through the tinfoil, in the process of candying, as Mr. Root remarks, I would say that I generally set my jars upright on the shelf, and there is no oozing out whatever observable, but in order to fill a shelf I often lay a lot of jars on their sides, and then I have found some jars leaky, but this has been only when the cork was deficient and the tinfoil not put on tightly.

CHAS. F. MUTH.

Cincinnati, April 12, 1873.

[For the American Bee Journal.]

Gallup.

Mr. J. D. Drusche, Vol. VIII, No. 10, Page 236, finds fault with Mr. Hosmer and then goes on to tell us the reasons why he lost all of his bees and how he lost them. Now we will venture the assertion that every bee-keeper in the land can and will loose his bees *every winter* if treated in the same manner. We cautioned bee-keepers in the back numbers of the JOURNAL about this very same thing, still they pay no heed to our advice. They are like young children just beginning to walk. When told that fire will burn them they cannot understand at all until they have tried the experiment, and some of them get very badly burnt. We call the loss of forty-six stocks of bees rather a bad burn. We were perfectly satisfiedwith losing five stocks in our experiments under the same head.

Now, Mr. Editor, we leave the readers of the JOURNAL to guess at the reasons of our friend's bees dying as they did, although he has told us plainly the reasons, and after all have got through guessing, we will state who is right and who is wrong. For we see plainly that we have to try another method of beating knowledge into our pupils' heads; a plain statement of facts they will pay no heed to. We must puzzle them a trifle, and then they will remember their lessons better. We will venture the assertion that hundreds have lost their bees from the same cause, and yet but very few are willing to attribute their loss to the right cause.

E. GALLUP.

Orchard, Iowa.

ACCORDING to the new regulations recently issued by the authorities of the German Empire, no hives of bees are to be placed nearer than 93.5 meters to any turnpike or public thoroughfare, no nearer than 46.7 meters from other carriage-ways; and for violating the above rules, the person convicted may be fined twenty thalers, or be subjected to imprisonment.